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RUDOLF VIRCHOW

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The criticism so frequently made that an individual may be too contemporary to judge his influence upon a particular sphere of endeavor does not hold in the case of Rudolph Virchow. His contributions are so valuable that their effect will be felt for a period of time which can not be estimated. His name is inseparably linked with cellular pathology, of which he was the founder.

Our modern pathology properly begins with the classic work published in 1858 by Virchow entitled "Die Cellularpathologie in ihrer Begründung auf Physiologischen und Pathologische Gewebelehre."

Born in a small town, Schievelbein, in Pomerania, Germany, in 1821, and, as the writers are accustomed to say, "of humble parentage." In his youth and throughout his life he was eager and ambitious. Very analytical in his logic, he soon gained fame for his investigations. Before he was twenty-six he completed and published his elaborate research on thrombosis and embolism, which solved the riddle of pyemia. This work was published in two volumes.

The essence of Virchow's cellular pathology was his immortal aphorism "Omnis cellula e cellula." In his masterful work on embolism and thrombosis he summarized his views on the subject of pulmonary occlusion into four groups.

1. Blood clotting occurs as a result of compression of a branch of the pulmonary artery at some point, as when an artery is ligated.

2. A harmful substance or an irritation transmitted from adjoining structures by continuity of parts sets up an inflammation in such a vessel and this brings about clotting of the column of blood in the vessel, as is assumed for other blood vessels.

3. The blood clots spontaneously without a mechanical obstacle and without the agency of the vessel walls, the agency for clotting lies in the blood itself or in some elements mixed with it.

4. The occlusion results from a more or less compact mass which is brought by the circulation to the pulmonary arteries and there impacted.

In his work on cellular pathology dedicated to John Goodsir of Scotland he says, "The history of medicine teaches us, if we will only take a somewhat comprehensive survey of it, that at all times permanent advances have been marked by anatomical innovations, and that every more important epoch has been directly ushered in by a series of important discoveries concerning the structure of the body. So it was in those old times when the observations of the Alexandrian School, based for the first time upon the anatomy of man, prepared the way for the system of Galen; so it was, too, in the middle ages, when Vesalius laid the foundations of anatomy, and therewith began the real reformation of medicine; so lastly was it at the commencement of this century when Bichat developed the principles of general anatomy. What Schwann,

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however, has done for histology has as yet been but in a very slight degree built up and developed for pathology, and it may be said that nothing has penetrated less deeply into the minds of all than the cell theory, in its intimate connection with pathology."

Biological thinking in a cellular sense commenced about 1840 and this new conception was introduced by Rokitansky, who, however, followed the wrong direction in its application. Rokitansky's first edition was a treatise on pathological anatomy. His was a doctrine of "crases" and "stases" in which chemical states of substance were actually conceived as being "susceptible" to disease. Virchow promptly attacked this doctrine and it was ridiculed out of existence. Rokitansky was attempting, by a chemical hypothesis with bizarre terminology, to rewrite the ancient chapter of solidism and humoralism. Virchow termed this a monstrous anachronism.

After reading Virchow's criticism, Rokitansky was said to have never looked at his first edition again. Despite this, Virchow paid Rokitansky the compliment of being the ablest descriptive pathologist of his time.

Virchow graduated at the University of Berlin in 1843 at the age of 21. He began his first investigation in 1844 on phlebitis. In 1845 he was made assistant prosector with the large sum of three hundred dollars plus board and room. His fame, based on the good sections he made, soon spread. He read his paper on "Inflammation of the Veins" on the 2nd of August, 1845, the occasion of the fiftieth anniversary of the foundation of the Academy of Military Surgeons in Berlin. In 1846 he was made full prosector of the Charité Hospital at Berlin and controlled the whole anatomical material in that great institution. He immediately utilized the vast amount of material this position gave him and how diligently he used it is shown by the fact that in 1899 he dedicated the Pathological Museum of Berlin, to which he gave his entire collection of 23,066 preparations. These had been individually labeled and prepared by himself. In 1845 he described leukemia as white blood, which brought him into dispute with John Hughes Bennett. He termed leukemia "Sarcoma of the blood with liquid intercellular substance."

He delivered many lectures on pathologi-

cal anatomy and in 1847 received his appointment as regular lecturer in the university. His thesis for the position as Privatdozent had to be given in Latin. In the same year, with the aid of Reinhardt, he founded the Archives for Pathological Anatomy and Physiology and for Clinical Medicine known as Virchow's Archives.

In 1848 the German government sent him into upper Silesia to study the typhus fever that was prevalent there. His report was a masterpiece consisting of both medical and social facts. This report did much to enhance his reputation as a painstaking investigator and an accurate observer.

The histological examination of normal and diseased tissues convinced him of the functional importance of cells as regards life, but his studies of the connective tissue led him to his most important conclusion, that all cells, including pathological cells, come from pre-existing cells. This latter point had remained obscure even to Schwann, who, in 1839, the year in which Virchow matriculated in medicine, had published his great work on the cell structures of animals and showed that the ovum was a cell, the significance of which was not grasped by him. Cells were recognized, but only as building material.

In 1849, Virchow's political views, which were later to become quite prominent, led him into some difficulties. His father was a hard-headed conservative farmer, and city chamberlain of the town of Schivelbein, ready to accept the authority of his superiors. Not so, his illustrious son, however. Virchow, now prosector at the Charité Hospital of Berlin, a government institution, expressed himself openly concerning his political views and carried on an active campaign against the government. He said, "As a man of science, I am necessarily a republican; for the realization of the demands determined by the laws of nature and the demands that arise out of human nature is only possible in a republican form of State." The minister of public education, through the agencies of political pressure by the government and political factions, relieved Virchow of his government position in the Charité. But Virchow's popularity brought such a force of protest from medical societies, physicians and students, who had academic freedom at heart, that the order was rescinded.

Virchow was requested, however, to

move into new quarters where his political influence on the employes and officials of the hospital would not be felt. In addition he received one hundred and fifty dollars for scientific research.

Perhaps this incident influenced him to some extent in accepting the call to the University of Würzburg. This was in 1849. However, even before Virchow's political difficulties with the Government in Berlin, negotiations had been in progress between the medical faculty at Würzburg and the Bavarian Government to extend a call to Virchow.

Professor Oertel, Professor of Pathology of McGill University, is authority for stating that the chief promoter of this scheme to bring Virchow to Würzburg was Rinecker, to whose wise judgment that university already owed the selection of Kiwisch in gynecology and Kolliker in anatomy. But the Bavarian government at first hesitated on account of strong clerical and political opposition to Virchow, but finally consented and Virchow was officially called. Thereupon he made certain demands in Berlin, which, as the Minister of Education stated at that time, could not be met for financial and other reasons, and Virchow accepted Würzburg.

In 1856 the University of Berlin recalled him on his own terms. Here he remained until his death on September 5, 1902.

Knowing what we do today of pathological anatomy, it may be difficult to picture to ourselves the prevalent opinions of disease as they existed even so short a time ago as the early years of the eighteen hundreds. Humoral pathology was the reigning thought. The fevers, for example, were classified according to the symptoms, such as catarrhal (yellow tongue with pain in the epigastrium), bilious, rheumatic, etc.

Rokitansky, the famous pathologist, living in the dissecting room, made two errors—ignorance of and disregard of histology and the clinging to humoral pathology. Pathology was an appendage to the natural sciences then recognized.

At the time Virchow began his studies, it was generally held that cells originated from an unorganized germinal substance, the blastema. Out of the latter was differentiated, first, a nucleus, and later, by diffusion through the nuclear membrane, the cell protoplasm. The intercellular substance and exuded fibrin were regarded as mother

substance of cells and all inflammatory and even tumor cells were traced to vital differentiation of such at first unorganized blastemas.

In April, 1847, Virchow, writing on the standpoints of scientific medicine, in the first volume of the Archives for Pathological Anatomy and Physiology and for Clinical Medicine, said, "We ought not to deceive ourselves or each other in regard to the present condition of medical science. We shall soon perceive that observation and experiments only have a permanent value. Then, not as the outgrowth of personal enthusiasm, but as the result of the labors of many close investigators, pathological physiology will find its sphere. It will prove the fortress of scientific medicine, the outworks of which are pathological anatomy and clinical research." Five years afterward he could say, "The scientific method of medical research is firmly established. It is not my merit to have discovered it. Without me it would have been found, and the new trail would have been followed."

When Virchow founded the Archives bearing his name in 1847, he portioned out the whole field of medicine. Hirsch was his right-hand man in this endeavor. He surrounded himself with a distinguished staff of abstractors, most of them original workers. The rules he laid down in his prospectus stated that the abstractors were not to give space to merely speculative papers, but to pick out the best ascertainable new facts and summarize them without note or comment. Indexing in two volumes was a tribute to German system and method. Before many years each specialty of science had its own archive or Zeitschrift, until today the library shelves are groaning under the weight of the literature of the years.

Virchow built the first pathological institute in which all departments of pathological research were properly housed, united and coördinated. He was responsible for making it an academic university institute on hospital grounds. He lived to see every university of note in the world follow.

In 1858, Virchow coördinated his pathological work and delivered his famous twenty lectures to an audience of physicians under the title of "Cellular Pathology as Based upon Physiological and Pathological Histology."

He formulated four great principles in these lectures—and they remain true today.

First—The cell is the unit of life.

Second—All cells develop from pre-existing cells (the famous aphorism—*omnis cellula e cellula*).

Third—Diseases are pathological cell changes and disturbed cell relations.

Fourth—The anatomical changes thus produced constitute the disease.

With these principles, Virchow threw into the discard all speculative and fantastic theories held about disease for centuries. It was truly the beginning of modern medicine. No one can really grasp the entire significance of this discovery. By it he created the modern objective study of disease and the anatomical conception of diseased processes as cell changes. This was Virchow's greatest contribution to scientific medicine.

He delved into all domains of medicine, as a study of his papers will show. He made extensive researches into anthropology, publishing many papers in this field, such as "Contributions to Pathology of Skull and Brain," "Cretinism," "Development of Cretin Cranial Deformities." He covered subjects connected with public hygiene, reform of medicine, epidemics, endemics, statistics on morbidity and mortality, hospitals, military medicine, criminal law and forensic medicine, but his name will live for his contributions in pathology. What we must learn from his success is that observation and experimentation were the two principles upon which rested the whole structure of his life work. Up until this time medical thinking was more or less wholly speculative philosophy and, as the Germans call it, "Fantasieren."

When Virchow returned to Berlin from Würzburg in 1856 he was thirty-six years old, and in the prime of his intellectual vigor. Because his fame had spread internationally, the German government provided him with a special building, the Pathological Institute, where he did all his subsequent work. His famous contribution on tumors was published in 1863 and this alone would have been sufficient to gain for him undying fame. How diligently and laboriously he worked is shown by the fact that this work, as well as the cellular pathology, was carried on at the very time he was active as a member of the Prussian House of Representatives. He considered this latter a diversion. His interest in civic affairs was actuated by his concern for the welfare of

the body politic in all its relations. He was mainly responsible for the installation of the famous Berlin sewerage system. His positive nature brought him into conflict with many dominant leaders of thought; his most famous adversary was Bismarck. His opposition to this famous personage was continuous and so violent that on one occasion it led to a challenge to a duel, coming from the Iron Chancellor. Their differences were mainly along the line of military policies.

Virchow was supremely confident in his quarrels with Bismarck and the former's reputation made him feel like a demigod—"cocky" might be the colloquial expression. Note the following conversation:

BISMARCK: "Does not the honorable member deem it possible that, in the domain of his specialty, one to whom anatomy has been only a side issue, on addressing an audience politically sympathetic towards the speaker and personally well-disposed toward him, but not profoundly versed in the science as the honorable speaker himself—that before such an audience, such a speaker (with less eloquence than the honorable member has displayed) might with conviction put forward anatomical statements of whose inaccuracy the honorable member, being himself an expert, would be fully convinced, but which he would only be able to refute before an audience as fully conversant with all the details as himself is?"

VIRCHOW: "I wish the minister president were likely to win among the diplomats of Europe a position so highly esteemed as my own among the specialists of my profession. His policy is indefinable. We might even say that he has no policy . . . and above all, not the slightest inkling of a national policy. He has no understanding whatever of national concerns."

And then Bismarck, aroused, replies:

BISMARCK: "I fully recognize the honorable member's high position in his own specialty, and I admit that in this respect he had the advantage of me, but when the honorable member forsakes his own province, and, uninstructed, trespasses upon my field, I have to tell him that in political matters his opinion weighs very little with me. I really think, gentlemen, I do not exaggerate in saying that I understand these things better. The honorable member charges me with a lack of understanding of national politics. I can throw back the charge, while suppressing the adjective. To me it seems that the honorable member has no understanding of politics of any kind."

Virchow at one time expressed his doubts of Bismarck's truthfulness and Bismarck countered with a challenge to a duel. Virchow's answer at first was a vague one and then a flat refusal. Bismarck at this time was fifty years old.

Both Virchow and Bismarck naturally had certain ideals in common. Both were united in their opposition to the Centrist or Catholic party led by Windhorst. It was Bismarck's quarrel with this party that led

to his famous remark, "Nach Canossa gehen wir Nicht," meaning that the German government would not discuss their difficulties with the Pope. Henry II of Germany had to do penance for two days before seeing the Pope. Like his father, Virchow himself was an atheist. At one time he said, "I have made thousands of postmortems but have never come across any trace of a soul."

One can understand some of Virchow's egotism from the opposition which he encountered early in his career when he was struggling to "put over" his "omnis cellulae cellula" idea. When he read his paper on "Inflammation of the Veins" on August 2, 1845, he caused general indignation and resentment. This seemed like heresy. Busch, the director of the obstetrical clinic, exclaimed, "Well, well, did you hear that? He tells us that we know nothing at all."

It was not many years later when he had the whole medical profession at his feet and eating out of his hand, as it were. Everything was "Virchow says"—and this carried with it the stamp of finality. So it is perhaps not to be wondered at that he became an egoist and a "demigod." But with all this it would seem that if his psychic character was fundamentally sound his modesty should have asserted itself to some extent at least. History records that many geniuses (for Virchow was that) have reached the pinnacle of success and have kept their modesty to the end. One can of course find many excuses for his conduct. Much of his pathological work was plagiarized and he says of this, "For years I have become accustomed to the fact that others utilize my labors. I have complained of that in 1856 and have more reason now. Many pupils who learned the new results of my research in my lectures have not always remained conscious of the source of their knowledge and thus have not always been in a condition to give me credit in their publications. Whoever has gathered around himself many pupils through many years must expect that his own thoughts may return to him from afar."

The following is a short sketch given to me by Dr. Ballin, who was one of Virchow's pupils:

"Virchow was really too advanced in his thinking for the undergraduate student. It took him several years to get through the chapter of special pathol-

ogy. It took a whole semester for him to lecture on the liver, and this, obviously, demanded too much detailed knowledge for the young student. The expression of inattention could frequently be noted in his large audience of over three hundred, and Virchow was always ready to pounce on one of the tired looking fellows about the inattention shown.

"On the other hand, he was a splendid teacher for any one who wanted to learn a system. One had to be scrupulously adherent to his technique on post-mortems as laid down in his book on 'Sektionstechnik,' which is followed in all autopsies except for modern improvement in taking out the whole peritoneal or pleural sac at times. On the autopsy table there were always five knives, one to be used for the cartilage of the sternum and the finer ones graded for different types of tissue, and woe to the man who took the fine knife for rough tissue. This should still be taught to internes and surgeons who use fine instruments for cutting bandages and to some of our pathological confreres who are always lacking a sharp knife.

"A special grievance in Virchow's eyes was mutilation of specimens, which is still a hobby of physicians and students, as may be seen in our Friday morning conferences, where everything from tooth-picks to pencils is used to mutilate the specimens sent around. The glass containers for specimens were sealed with paraffin, and again woe to the student who tipped such a container so that the alcohol touched the paraffin. He had a lecture coming to the effect that paraffin was soluble in alcohol, et cetera. The great man always had time for such detailed instructions, to which many of his students owe their education in important details.

"Virchow was a small man, not weighing more than 120 to 130 pounds, with a very intelligent face, keen blue eyes looking through gold-rimmed eyeglasses which were often up on his forehead so that he could use his myopia to better advantage for seeing details closely. A good deal of the detailed teaching in Virchow's Institute was left to assistant professors, who, unfortunately, had learned from Virchow, as Schiller says of Wallenstein's sublieutenants, 'How he coughs and how he spits.'"

Virchow was a man of wide attainments. His studies led him, as stated before, into many fields, such as anthropology, paleontology, archeology, teaching social reforms, politics and of course pathology. During the Franco-Prussian war he organized the Prussian Ambulance Corps and superintended the erection of the army hospital in Berlin. He wrote an essay on the hospitals of the middle ages, giving a catalogue of these institutions in 155 German cities. In Virchow's studies on leprosy of the Middle Ages, he listed and described with great patience an amazing number of leper hospitals in all German cities during the 13th and 14th centuries. The building of leprosariums represent a truly great social and hygienic movement.

His contributions of anthropology number into the hundreds, for this was his special hobby. One of them is of particular interest to Americans, namely, the "Atlas Cranii Americani," which he prepared in

memory of Columbus and the discovery of America. Racial characteristics, anthropometry, relics of the Trojan war and many other studies along this line occupied much of his time. He erroneously ascribed the defect in the Neanderthal man as due to osteomyelitis. Prehistoric studies on syphilis, tattooing, and the Trojan wars were among his many contributions. He contended that humanity is of diverse origin. In his opinion, the left ulna of the original Neanderthal skeleton, which was fractured, was rachitic. He maintained that the caries sicca of prehistoric and pre-Columbian skulls was not true syphilis, but either identical with the arthritis deformans (Hohlengicht) of old cave-bears or else caused by plants and insects, which would eliminate the question of prehistoric syphilis in Europe.

He paid particular attention to the physical anthropology of the Germans. He was very patriotic and the remark made by Quatrefages during the Franco-Prussian war when the Natural Museum of History at Paris was accidentally shelled, that the Germans were a barbaric, Mongolian race, incensed Virchow. This led to the famous public census of the color of the hair and eyes of 6,000,000 German school children.

He also made valuable contributions to parasitology, his work on trichinosis being especially good and likewise his discovery of the sarcinic and aspergillid forms of mycosis of the lungs.

His original descriptions and discoveries are very numerous. In 1856 he pointed out the embolic nature of the endocarditis plugs. He first described leontiasis ossea, aortic hypoplasia with hypoplasia of the heart associated with chlorosis.

He differentiated lupus and tuberculosis. He discovered the neuroglia in 1846 and the special lymphatic sheaths of the cerebral arteries (1851).

Virchow's salary, when he returned to Berlin after his stay in Würzburg, was \$2,000, and he regularly sent part of his pay to his parents for their support.

Virchow was set in his views and very dogmatic. He opposed certain of the philosophical views of Haeckel. He did not accept Darwinism in its entirety and cautioned against the whole-hearted acceptance of Darwin's ideas on natural selection until more thorough studies had been made and

further scientific investigations had proven the worth of these views. It is said that Fritz Müller was the first German to support Darwin, Haeckel the second, and Weismann the third.

His greatest competitor was the bacterial era which followed after his teachings had reached all parts of the world. Some of the bacterial enthusiasts, such as his own pupil, Klebs, thought that the bacterial origin of disease would spell defeat for Virchow's teachings. The sound fundamentals laid down by Virchow were often literally thrown overboard by the hysterical bacterial enthusiasts. We can see this today in our own time when fanatics are ready to brush aside sound teachings and permit the pendulum of enthusiasm to swing too far in one direction. It is fortunate for us that the profession has within it sagacious older "heads" and Nestors who have lived through periods of enthusiasm and found that steering a slow middle course is usually the best.

Koch's work with the anthrax bacillus fascinated Virchow's pupil, Cohnheim, who begged his chief to convince himself of the anthrax experiments. So Virchow answered him rather snappily, "All right, let him show me."

Virchow was, of course, somewhat prejudiced against Koch, for it was a debate between the old and young school of teaching. It may be that Virchow did not at first grasp the significance of the bacterial origin of disease. From what I have been able to gather, he was not unalterably opposed to the teachings. Helmuth Unger, who wrote a biography of Robert Koch, discussed the debate between Virchow and Koch and called attention to Virchow's fairness in the matter; for already in 1868, therefore long before Koch's discovery, Virchow acknowledged the existence of the cholera bacillus, but he desired strict proof of all theories. Dr. Oertel, the McGill pathologist, says, "With it all he was just and fair and no one has ever had greater regard for duty and responsibility. At the heated discussion on the value of diphtheria antitoxin in the Berlin Medical Society shortly after it was introduced in 1894, I heard him discuss the question with eminent fairness and impartiality." Posner, who came to the defense of his teacher, Virchow, wrote, "He always demanded scientific proof, a rule which he laid down for himself. When Cohnheim

came out with his new inflammatory theory, Virchow facetiously remarked that the students didn't see anything else now but the diapedesis of leukocytes. And in a like manner, when the bacterial era began, he opposed those who, in finding a microorganism, erroneously believed that they had gotten at the bottom of the disease characteristics. It is absolutely false if one accepts the view that he was unalterably opposed to the teachings of the bacteriological origin of disease."

It is rather interesting that, despite the fact that these two great men, Virchow and Koch, lived in the same city (Berlin), they never met again. If it was possible, they went out of each other's way. Virchow, had he said the word, could have seen to it that Koch was asked to Berlin; but he remained silent and other influences, however, saw to it that Koch received the call to Berlin.

Virchow was no exception to the rule that great men are eccentric. With all charitableness it must be said of him that he lacked the "milk of human kindness." He was often unnecessarily severe and most sarcastic. His manner was rude and brusque. He was a hard taskmaster, but he himself lived up to his standards of living. His day began at 8 o'clock in the morning with a sumptuous breakfast of meat and beer, and later in the morning he ate a hearty luncheon, for, as he says, "Without these sustaining matters, the work of the day would have been too exacting." And he remarked that he learned more in conversation over beer and wine than sitting at his desk. He was an exponent of the German "Gemüthlichkeit."

He had no time for the amateur meddler and scientific "climber." Like Warthin of Ann Arbor, he had the reputation of being the hardest examiner to "get by." He was not infrequently very insulting to students and others, showing an utter disregard for feelings. He suffered somewhat from exaggerated ego "and placed himself and his subject on a high pedestal. This disregard for others led to an irregularity of teaching hours. He would come and go as he pleased, beginning and ending his lectures as his fancy dictated. He would show his displeasure in no uncertain way when anyone took exception to his arbitrary methods. His associates also suffered from his eccentric ways and he was slow in promoting them."

He showed to a marked degree the German characteristic of stubbornness, for he was set in his ways and ideas. His displeasure with the development of bacteriology and immunology has been mentioned. The chemical explanation of vital processes was so much like the old humoral pathology that one can understand his objections, but it must be said that some of the more recent work supports in a measure his objections.

It may be that it was fortunate for modern medicine that cellular pathology was championed by such a firebrand as Virchow, for a less enthusiastic fighter might have met defeat at the hands of able adversaries.

Virchow was a bitter enemy, going to great extremes to prove his point and upset his adversary. Traube and Frerichs of Berlin did not get along very well and Virchow favored Traube and hated Frerichs. These two clinicians would walk at the head of their classes without paying the least attention to one another, and the pupils were forbidden to associate in public. The new Charité Hospital, an ugly, gloomy building with grated windows, harbored the insane, syphilitic and convicts. Virchow was physician in chief. Making rounds on these patients was believed to be a part of Virchow's ironical program in reference to Frerichs. Regenburger relates that he once saw Frerichs harpoon the biceps of a living patient to secure a preparation of trichina. Four days later the patient died of pyemia. The case was posted by Virchow, who began the necropsy by mimicking the solemn, pontifical manner of Frerichs: "Gentlemen, another sacrifice to our science."

He had a high regard for his English and Scotch contemporaries. He had a genuine affection for Lister and paid a wonderful tribute to Lister at a small private dinner which he gave in Lister's honor. Lister was much affected by this tribute and found difficulty in restraining his emotions. Pasteur, too, was held in high esteem by Virchow. These men were of course able scientists, setting up a standard at least equal, if not better, than Virchow's. One cannot help but contrast the great Virchow with that wonderful teacher and scholar, Osler. Such a contrast—from the human side—the direct opposites in dealings with their fellow man.

Osler, of course, was quick to recognize the soundness of Virchow's teachings and one of the first things he did when he re-

turned from Berlin to Montreal was to adopt Virchow's teaching methods.

It has been said of Virchow that he was a "dyed-in-the-wool" morphologist. While he demanded proof of theories, he recognized the fact that one can not duplicate the "natural experiment of disease" of the human in an animal, for we never duplicate in animals the many phases of disease as we meet with it in humans.

Virchow was small in stature, with rather small eyes. His ability as a speaker was not

at all striking, being hesitant at times in his speech, but winning his audience by his sincerity and enthusiasm. He received almost all the honors that can come to a man in a lifetime. Degrees, medals, prizes, the naming of hospitals, such as the Rudolph Virchow Hospital of Berlin, were all his. He was honored by his emperor both in life and in death. The whole medical world paid him honor and in his death lost a genius and pioneer, a champion of medical truths, a keen and ardent scientist.

CONVULSIONS DURING ETHER ANESTHESIA

Two Case Reports and Discussion

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It was in 1846 that William Morton, a dentist, demonstrated the use of ether as an anesthetic at Massachusetts General Hospital. Inhalation anesthesia for surgical operations had its inception at that time. Since then millions of ether anesthetics have been administered. Yet for eighty years, or until 1926, no one ever heard of "ether convulsions."

Then suddenly the medical world was startled by Wilson of Manchester Royal Infirmary, who reported the first case of "ether convulsions." Since then nearly two hundred such cases have found their way into the literature. Each year the number grows as more and more surgeons add their cases of this dramatic accident to the list.

Can it be that for eighty years no surgeon had enough intelligence to recognize an "ether convulsion"? That is doubtful because the phenomenon is too obvious, too serious, and too impressive to have escaped the notice of all the great surgeons of the past.

If such cases had occurred prior to 1926 we would have heard of it. Hence, we must start our investigation of "ether convulsions" with this idea firmly in mind, that something happened about 1926 to make this most serious surgical accident possible.

What that "something" is we shall try to determine by a review of the theories of various investigators.

Description of "Ether Convulsions"

Before proceeding further let us understand what is meant by "ether convulsions." Rosenow and Tovell¹³ give the best description of this phenomenon:

"The patients are frequently children or young adults. Many are suffering from acute infections associated with pyrexia. Ether is the agent that

has been most frequently associated with the syndrome, although frequently it has been administered as a vapor, with oxygen or with nitrous oxide and oxygen.

"Respiration is usually rapid and is labored to some extent, but frequently the first untoward sign noted is twitching of the muscles of the face, occurring during the maintenance of the anesthesia. The pupils are widely dilated and the globe is fixed in position. The twitching spreads to the muscles of the neck, shoulders and arms, finally to the legs and abdomen. As the twitching spreads it becomes more active. Finally violent and sustained epileptiform convulsions occur, associated with cyanosis of varying degree. Hyperpyrexia develops. Following cessation of administration, recovery from anesthesia is delayed. Death may occur while the patient is in the operating room or later from exhaustion associated with deficient oxygenation."

There are three factors present in most of the cases presenting this syndrome. Most of the patients are children or young adults. Most of the cases are toxic, and nearly all the operations were with ether anesthesia. In Lundy's⁸ analysis of 144 cases found in the literature, seventy-three of them were toxic. Most of these were cases of acute appendicitis or acute mastoiditis. Ether, or nitrous oxide and ether, were the anesthetics used on all cases except one chloroform, two nitrous oxide and one ethylene.

It should be noted at this point that not all convulsions occurring during anesthesia are "ether convulsions." Bowman¹ believes there are at least three types of anesthesia convulsions. First, convulsions at the beginning of ether or nitrous oxide narcosis. This is of the coarse clonic type, later becoming tonic. Probably due to too rapid administration of anesthesia with backing up in the blood of excess carbon dioxide, and is probably respiratory in origin. Withdrawal of anesthesia usually stops this form of convulsion, but has no effect on "ether convulsions." The second type is a toxic convulsion due to ether impurities. This type was observed during the World War and ceased when the impurities were removed from the ether. The third type is the "ether convulsion" already described. This type is unrelated to the other two kinds.

Case Reports

The following two cases of the author's occurred during 1938.

Both of these cases had the common background of the vast majority of recorded instances of "ether convulsions," namely, they were children suffering from acute infections which were associated with hyperpyrexia and on whom operation was performed with ether as the anesthetic agent. In both cases the convulsions were typical in their onset and course. In both, the convulsions were stopped by the same agent, a barbiturate.

Case 1.—J. W., female, aged eleven. Diagnosis: Acute appendicitis with fecolith. *Laboratory Findings:* white cell count, 12,300; polymorphonuclear cells, 81 per cent; eosinophils, 1 per cent; small lymphocytes, 16 per cent; monocytes, 2 per cent. Urinalysis: negative.

This patient had a text-book type history of acute appendicitis. Her past history was essentially negative. There was no evidence of previous convulsions nor of epilepsy in the family.

At the time of operation the patient's temperature was 103 degrees, respirations 24, pulse 104, blood pressure 96/66. Preliminary drugs administered were: Nembutal 1½ grains given one and a quarter hours before operation; morphine sulph. gr. ¼ and scopolamine gr. 1/200 by hypodermic one-half hour pre-operatively. Anesthesia was nitrous oxide-oxygen-ether.

COURSE DURING OPERATION.—Shortly after the start of the operation the patient stopped breathing. Twitching of the face occurred, followed quickly by a major clonic convulsion. The anesthetic was stopped, artificial respiration begun and one ampule of alpha lobelin given intramuscularly. This convulsion lasted about two minutes. When the patient again began to breathe, anesthesia was changed to open drop ether and the operation resumed. Local infiltration anesthesia with one per cent novocaine was used in the abdominal wall.

Shortly after the peritoneum was opened the patient had a second major convulsion lasting three minutes. Oxygen-carbon dioxide (70-30 per cent) inhalations were used. The operation was completed without further anesthesia.

As the abdominal wall was being closed, the patient had a third major convulsion of somewhat longer duration than the others. Two grains of luminal sodium solution were given intramuscularly and the convulsion ceased. The patient had no further convulsions.

Convalescence was uneventful. Temperature and pulse returned to normal after the third post-operative day. There were no apparent after-effects of the convulsions and the patient was discharged on the tenth post-operative day. Date of operation was July 1, 1938, at 12:15 A. M.

Case 2.—G. C., male, aged ten. Diagnosis: Acute perforated appendicitis with generalized peritonitis.

The patient complained of continuous peri-umbilical pain for one and one-half days prior to operation. Vomiting was frequent the day before operation. Child's past history was essentially negative. Careful inquiry failed to reveal any evidence of convulsions or of a family history of epilepsy.

The physical examination was negative except for the abdominal findings due to perforated appendicitis.

Laboratory findings: (1) White blood count on admission was 21,000 with 96 per cent polymorphonuclear cells (22 per cent, non-filaments);

(2) culture of pus in abdominal cavity showed mixed organisms including short chain streptococci;

(3) urinalysis prior to operation was negative.

At the time of operation the patient's temperature was 102 degrees, respirations 22, pulse 128.

Preliminary drugs: Morphine sulphate gr. ⅛ by hypodermic at 6 P. M., two hours before operation, given primarily for relief of pain. *Anesthesia:* Open drop ether. Total anesthetic 270 c.c. No local anesthesia was used.

The operation was uneventful until closure of the abdomen was started. At this point the patient had a major clonic convulsion lasting five minutes. In view of our experience in Case 1, luminal sodium solution, grains two, was given, intramuscularly, followed by ten c.c. of a ten per cent calcium gluconate solution, also given intramuscularly. Also, inhalations of oxygen-carbon dioxide (70-30 per cent) were given. Convulsions stopped within two minutes and did not recur.

The anesthesia was stopped when convulsions commenced and was not resumed. No further convulsions occurred.

The convalescence was stormy, as might be expected with a case of perforated appendicitis and generalized peritonitis.

The abdomen continued to drain for two months. For one month (the length of hospital stay), the patient was septic.

Convalescence was further complicated by the development of pyelitis and by an abdominal wall abscess. Recovery was complete two months after operation. There were no apparent after-effects of the convulsions.

Theories at Present in Vogue

In June, 1938, Smith¹⁵ summarized as follows what he thought were the most tenable theories as to the cause of "ether convulsions":

(1) Hypoglycemia, (2) neurotoxin pro-

duced by streptococci, (3) calcium imbalance, (4) hyperpnea, (5) allergy, (6) disturbance of the heat regulating mechanism.

Two years before, Woolmer and Taylor¹⁸ published a somewhat different list of possible causes of this condition. These were: (1) Impurities in ether, (2) idiosyncrasy, (3) carbon dioxide accumulation, (4) sepsis, (5) over-oxygenation, (6) cerebral congestion, (7) heat stroke, due to overheated operating rooms.

Previously, Daly,³ Haseason⁶ and other English writers were of the opinion that atropine was a causative factor in producing a disturbance in the heat regulating mechanism and hence producing "ether convulsions" because atropine tends to check heat and fluid loss from the body. Yet in Lundy's¹⁰ analysis of 144 cases of "ether convulsions" many had no atropine. In fact, most of the fatal cases had no preoperative medication.

Concerning these theories it can be said categorically that none of them has been proven, nor has experimental evidence been offered to substantiate any of them except the neurotoxic theory of Rosenow. Let us briefly examine these theories.

Ether impurities, on analysis of the ether, has never disclosed harmful chemicals present in harmful amounts. Carbon dioxide with oxygen gives most effective relief from convulsions in many cases. Sepsis, in itself, is not the answer because ether convulsions have occurred in the absence of sepsis. Cerebral congestion, especially in the Rolandic area, is a possibility, but has not been verified.

Heat stroke, due to overheated operating rooms, is favored by many British writers^{14,18} and one American observer.¹⁵ Yet it is a fact that in a number of these cases neither the room temperature nor the patient's temperature was high.

Theory of Anaphylactic Shock

Waldbott¹⁷ has advanced the theory of an allergic reaction to the anesthetic agent. He says that, of the various explanations of death enumerated, most are well in accord with features encountered in anaphylactic shock.

If one considers the recent observations of Stroh¹⁶ on the less common manifestations of allergy, then Waldbott's explanation may not be so far afield. As Stroh says, localized edema of the brain simulating brain

tumor, has frequently been observed by brain surgeons and that many cases have been reported where epilepsy has disappeared following treatment of an allergic condition.

Epilepsy and ether convulsions may be allergic and a manifestation of anaphylactic shock. Yet there is no definite proof of this association. Argument is all on the basis of "post hoc, ergo propter hoc."

Hypoglycemia is a result rather than a cause of convulsions. Calcium imbalance is supported only by the fact that the administration of calcium seems to effect relief. Although this is not always effective, as in the case presented by Daly,³ where the patient had had calcium gluconate 5 c.c. twice daily for some weeks before operation and still had a convulsion. Hyperpnea alone is not of great importance as it occurs frequently during anesthetics without producing this syndrome.

Idiosyncrasy may be a cause. It can not be ruled out on the basis of present evidence. We know that many individuals are susceptible to various drugs in therapeutic doses. But why should we just begin to notice idiosyncrasy to ether in 1926? Hence, historically, if for no other reason, this theory is untenable.

Neurotoxic Theory of Rosenow

In Case 2 it was definitely established that the infection was streptococcal in origin. Whenever, as in Case 2, attempts were made to isolate the causative organism of infection, the streptococcus has usually been found.

In 1936 Rosenow and Tovell¹³ conducted a series of experiments on rabbits with cultures reproduced from the lesions of patients who had ether convulsions, as well as with cultures taken from the nasopharynx of these patients.

They found that in two of their five convulsion cases, cultures from the nasopharynx of these patients were streptococci, which were neurotropic in reaction to specific sera.

In their rabbit experiments they were not only able to reproduce the lesions for which the patients were operated on, but also they reproduced the typical "ether convulsions" as seen in the patients.

"The results of these experiments," say Rosenow and Tovell, "suggest that ether convulsions are attributable to a neurotoxin

or poison produced by some strains of streptococci in amounts insufficient to cause spasms in the absence of anesthesia, but which, in the course of general anesthesia, suffice to incite the muscular spasms characteristic of this condition."

Hence, if we postulate a patient who harbors a specific strain of streptococci in his system, either at present actively multiplying and producing neurotoxins or which was previously active, perhaps as an acute nasopharyngeal infection, so that the patient was sensitized to the protein of this strain of streptococci, and if we superimpose on that streptococci-sensitized system a cerebral irritant, namely, a general anesthetic such as ether, we have all the elements necessary to produce an anaphylactic shock or a convulsion.

Neurotoxic Theory Not Proven

Whether this neurotoxin of streptococcal origin is the real cause of "ether convulsions" or is only a contributory factor of real importance, cannot be definitely decided in the light of our present knowledge. Further clinical and laboratory study is needed to prove or to disprove this theory. However, it is the only significant attempt yet made to arrive at a scientific answer to this perplexing problem.

The chief argument against this neurotoxic theory is the fact that a fair number of cases of this type are on record where the patient did not have any evidence of infection. A notable example is the case reported by Gitlin,⁴ where the patient, aged thirty-one, had a perineorrhaphy, hemorrhoidectomy, salpingectomy, and uterine suspension done under nitrous oxide-oxygen-ether anesthesia. Gitlin offers some impressive evidence, based largely on the work of Lowenberg and Waggoner of the University of Michigan, for the theory that these convulsions are due to toxic by-products of anesthesia. His contention is that these by-products lessen oxidation in nerve cells and result in anoxemia of the brain and hence convulsions.

Gwathmey⁵ disagreed with this opinion and presented some experimental evidence to refute it.

The fact that patients have had "ether convulsions" in the absence of acute infection does not necessarily invalidate the neurotoxin theory as advanced by Rosenow and Tovell because, as shown in their ex-

periments, this tendency for anesthesia to induce convulsions persisted until the experimental animal was entirely recovered from the streptococcus infection, even though there was no clinical manifestation that the infection persisted.

Of the multitude of theories propounded to explain the cause of "ether convulsions," the neurotoxin theory just described is the only one which bears close scrutiny. It must be remembered that prior to 1926 this sort of case did not exist. Hence, any theory advanced to explain the cause of this phenomenon must be one that takes cognizance of this time element.

If we assume, as well we might, that a new strain of streptococcus developed about 1926, then the neurotoxin theory of Rosenow and Tovell is the only tenable explanation so far advanced.

Without question, further proof is needed. To obtain that proof it would be advisable that every surgeon, so unfortunate as to have such a case, try to obtain cultures from both the site of infection and from the nasopharynx and to repeat the experiments as conducted by Rosenow.

Prophylaxis and Treatment

As might be expected, the treatment of this condition is as varied as the theories concerning its causes. But from the morass of confusion there has recently emerged some definite ideas on the best therapy for this surgical emergency.

The anchor sheet of the surgeon is the barbituric acid group of hypnotics. These drugs readily suggest themselves for the control of convulsions because of their excellent effect in epileptic seizures and delirium. Their use in these latter conditions prompted the author to employ one of the barbiturates in his first case of "ether convulsions."

Lundy,¹⁰ Woolmer and Taylor,¹⁸ Rosenow and Tovell,¹³ Gwathmey⁵ and others highly recommend the use of intravenous barbiturates in full doses during the attack and also as preoperative medication in young, septic individuals where general anesthesia must be employed.

Oxygen-carbon dioxide inhalations are also recommended during the attack. Naturally, the anesthetic should be stopped. Some observers recommend the use of chloroform if general anesthesia must be continued.

Only those forms of treatment that have

been most successful and which seem most rational have been mentioned. To enumerate all the remedies proposed would only lead to confusion.

Lundy¹⁰ recommends either spinal or basal anesthesia in preference to inhalation anesthesia in all young and septic individuals as the best prophylaxis against this disastrous accident.

Summary

1. Since 1926, "ether convulsions" have been reported in increasing numbers. More than 200 such cases are found in the literature in the ten year period 1926-1936.

2. Two additional cases of this syndrome are reported by the author.

3. Many theories as to the cause of "ether convulsions" have been advanced. None has been proven, although the neurotoxic theory of Rosenow bears the closest scrutiny.

4. The neurotoxic theory is based on the finding of a streptococcus of neurotoxic origin in certain of these cases and the ability to reproduce the syndrome in rabbits inoculated with cultures of this strain of streptococcus.

5. The treatment of "ether convulsions"

is the intravenous administration of a soluble barbiturate.

6. The best prophylaxis in septic, young individuals with hyperpyrexia who must be operated is the use of basal or spinal anesthesia whenever possible.

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THE IMPORTANCE OF CAREFUL ENVIRONMENTAL STUDIES IN ALLERGIC PATIENTS

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During the past few years, there has been a wide-spread sale of simple scratch testing allergen outfits which has increased to a considerable extent the number of patients receiving allergic study. That such simple skin testing outfits are of some value in a few cases cannot be denied. The physician should realize, however, that in the majority of chronic allergic diseases, the study of an allergic case is very incomplete unless a more thorough investigation is pursued. Unfortunately many physicians, as well as patients, are under the impression that a complete allergic study has been made when such simple routine skin tests have been performed.

The causes of failure are chiefly as follows:

1. Scratch testing, even with the most potent extracts, frequently fails to elicit positive reactions in cases of long duration, and particularly in food-sensitive individuals. In these cases, it is essential that the scratch tests be followed up by the intradermal method, using concentrated, potent extracts.
2. The simple sets of allergens described above frequently do not contain many of the important sensitizing agents.

3. Most important of all, even the best of skin testing methods may fail without a careful investigation of environmental factors, residential and occupational. Such factors, when suspected, should be checked by intradermal tests with properly prepared extracts of the suspected substances.

The importance of very careful history-taking and the study of the environmental factors involved in each case is perhaps far more important than any method of skin testing, which, in the last analysis, is only

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frequently confirmatory. The purpose of this paper is not to discourage intelligent skin testing, which so frequently produces valuable clues as to the etiological factors. But it cannot be emphasized too strongly that very careful and thorough history-taking and environmental studies are of the greatest significance, as the following cases demonstrate.

Case 1.—Miss E. P., aged thirty-nine, was first seen in May, 1938. She was a general office worker and had been a dictaphone operator for the past four years. She began to cough in July, 1930, and began to wheeze in September. She received fifty-six scratch tests at this time with a slightly positive reaction to ragweed. An operation was performed on the nose in November, 1930, because of considerable nasal blockage, which improved the asthma for about two years. During this time she noticed that taking aspirin would produce attacks. In the fall of 1933, she began to have asthmatic attacks every night, requiring three to four injections of adrenalin each night. During the past three years, her asthma has been the same winter and summer. She has noticed slight improvement during week-ends, but no sustained improvement while on vacations for a week at a time.

When first seen in May, 1938, she had had very severe asthma continuously for one week, unrelieved with frequent doses of adrenalin. Despite the use of other palliative measures she remained in status asthmaticus and was admitted to the hospital the following day. She was placed in a relatively dust-free environment and was given a very simple diet, eliminating common allergenic factors. After several days, during which she received frequent injections of adrenalin, calcium gluconate and intravenous aminophyllin, she recovered and left the hospital at the end of the week. The second night at home the asthma recurred and it was found that she had failed to completely cover with non-allergic encasings the pillow and mattress. Following this the asthma cleared again and she returned to work several days later. Within a few days after returning to work, the asthma returned with almost as great severity as before. An inspection of her place of employment revealed that her duties as a dictaphone operator required that she shave the dictaphone records daily. It was immediately arranged that someone else in the office perform this duty for her and within a few days the asthma disappeared completely. She has remained free of asthma for the past eight months.

During the time she was under observation, complete intradermal skin tests were performed for several hundred possibilities, including office dust, dictaphone dust, several specimens of house dust, molds, and bacteria. The only significant reaction occurred with cotton and kapok mattress dusts. It was technically very difficult to make extracts from the ingredients of a dictaphone record since these are insoluble in water. The chief etiological factors in this case were dust from dictaphone shavings and mattress dust. The elimination of the latter factor would not have been sufficient to control this case and its solution depended finally on the discovery of the occupational sensitivity to dictaphone shavings.

Case 2.—Mr. N. S., aged thirty-two, was employed as a printer. He was first seen in June, 1934, because he had fall hay fever for the past ten years, accompanied by asthma during the last few hay fever seasons. He had received pollen injections for

three or four years with only fair results. There was no history of perennial symptoms. He gave positive scratch reactions to all the grasses and weeds, but stated that his early spring and summer symptoms were so slight that he desired treatment for only the fall pollens. He was treated with the fall pollens beginning in June, 1934, until September, 1936, reaching a dosage of 3 c.c. of the 3 per cent extract during the pollen season, and receiving 1.5 c.c. every three weeks between the pollen seasons. He was entirely free of asthma and hay fever during this two-year period. At the end of that time, his scratch tests were negative to the fall pollens, and it required an intradermal test of 1 per cent extract to obtain a positive skin reaction.

The patient was not seen from September, 1936, until the following March, at which time he stated that he had begun to have asthma around January, chiefly while at work, but occasionally getting severe attacks after arriving home at night. He noticed that he was better week-ends. He stated that during the past few months he had begun to use a spray material in his work which made him cough. This material was sprayed automatically on freshly printed matter so as to prevent smudging. The spray material produced clouds of fine dust which settled on the floor and fixtures. The manufacturers advised me that it was a mixture of gum arabic (gum acacia), methyl alcohol and water. Intradermal skin tests were performed with a 10 per cent extract of the spray mixture, and a 1 per cent extract of gum acacia. Each of these solutions contained approximately the same amount of acacia. A four-plus reaction was obtained to each of these with marked pseudopods and itching at the site of the injections. Tests with these extracts on several controls were negative. Passive transfers on two normal individuals were positive.

The patient was given subcutaneous injections of the spray extract two to three times a week, during which time he wore a respirator which controlled his symptoms almost completely. On one occasion, an injection of .8 c.c. of the full strength spray extract produced an attack of asthma within half an hour. He received injections of the spray material until November, 1937, after which time he was able to get along almost completely without the use of the respirator, except when large amounts of the spray material were being used.

Case 3.—Miss N. McK., aged thirty-three, school teacher, was first seen in November, 1937. She had had severe nasal blockage and watery discharge beginning in April, 1936, which lasted nine weeks. It began again in the last week of September and has persisted since. She was occasionally better on week-ends, but not sufficiently improved to be certain. She was, however, definitely free of all symptoms from the time school closed in June, 1936, until she resumed teaching in the fall. Her symptoms recurred a few weeks later. She recalled that some change had been made in both the chalk and the floor cleaning compound in the previous year. Complete intradermal skin tests gave many positive reactions to food and inhalants which when removed produced no appreciable change in the patient's condition. She was tested with dust extracts from several schools which were in stock, with negative results. Several house dust extracts were negative. An extract made from the sweepings of her own classroom produced a strongly positive reaction. Extracts of the chalk dust and cleaning compound were negative. Injections were begun with the specific school dust extract and after two weeks of treatment, the nasal symptoms had cleared up completely. Treatment was continued twice a week until the spring, after which time she remained free

of symptoms until the following November, when exposure to school dust again produced mild symptoms easily controlled by occasional injections of this specific dust extract. This case demonstrates the importance of the proper interpretation of skin reactions. Despite many positive reactions to foods and inhalants the chief exciting factor in this case was not discovered until a dust extract had been prepared from this patient's place of employment. It also demonstrates the specificity of dust extracts, since no other schoolroom dusts with which she was tested gave any reaction.

The clear cut histories as set forth above were not obtained until after many visits and repeated questioning of the patients.

It is most advisable while investigating allergic patients to repeatedly question them about such possibilities. It was only after many visits that the significant details of their histories could be recalled by these patients and arranged in chronological order.

These cases are reported to demonstrate the extreme importance of very careful history-taking and the investigation of the environment of allergic patients. No method of skin testing and certainly not simple scratch testing can ever replace this phase of allergic study.

INDUSTRY IN RELATION TO PARANOID SCHIZOPHRENIA

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The rôle that industry plays in precipitating various forms of mental disorders is indeed a significant one, one which to date has not been sufficiently nor adequately appreciated. In this article, the writer endeavors to present an unbiased, irrefutable, statistically supported survey of the present existing picture.

For material, there were available the records and case reports of the Eloise Hospital, an institution located just outside of the industrial city of Detroit. To the psychopathic division of this hospital are sent those unfortunates who are committed by the Probate Court of Wayne County as mentally incompetent or insane.

Inasmuch as Detroit is perhaps the largest industrial city in this country one would of necessity expect that this hospital would receive a large percentage of people of the working or industrial class.

Investigation of 1,892 male cases revealed the fact that there were 690 cases in this industrial group, between the ages of eighteen and fifty-five years respectively, hospitalized at the time of this survey. The writer arbitrarily picked the ages of eighteen to fifty-five inclusive as representing the average limits of most satisfactory industrialization.

The only other instance in which an arbitrary figure was used was when the writer considered only cases that had been in the hospital for a period of ten years, or less. The reason for this ten-year limit being selected was that it was felt that the increased tempo of industrial production and the newer methods of production have been in force for perhaps no longer than the past ten years.

The ages eighteen to fifty-five respectively represent the ages at the time of admission to the hospital, not the present age.

TABLE I.

Total cases studied	1,892
Total cases selected for tabulation.....	690
Total cases of selected group—American born.	395
Total cases of selected group—Foreign born...	295

The average age at admission was 38.04 years. Bearing in mind the ten-year limit of hospitalization, the average length of hospitalization was 4.2 years. Of course, these cases are still hospitalized and many of them may not be successfully re-industrialized.

The average length of the patient's industrial life in Detroit prior to coming to the hospital was 8.2 years.

These statistics and all others will be found later in this article in tabulated form and in relation to each other.

These tables will endeavor to show the proportions and percentages of the incidences of the various types of psychosis occurring in individuals of different nationalities and consequent heritages, of the type of industrial endeavor most commonly encountered, and the relationship of the institutionalized cases to society from the standpoint of presenting social problems in

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the form of dependents left to be supported by society.

Under each table, attention will be called to the most significant facts.

TABLE II. NATIVITY

	No. Cases	Per Cent Total Cases	Per Cent American born
<i>American born:</i>			
Michigan born ..	140	20.29%	35.4%
Southern born ..	115	16.67%	29.2%
Remainder U. S.	140	20.29%	35.4%
Total	395	57.25%	
	No. Cases	Per Cent Total Cases	Per Cent Foreign born
<i>Foreign born:</i>			
Poland	103	14.93%	34.9%
Russia	32	4.64%	10.85%
Italy	25	3.62%	8.48%
Canada	23	3.33%	7.80%
Austria	20	2.90%	6.78%
Hungary	14	2.03%	4.75%
Great Britain and Ireland ..	11	1.58%	3.73%
Greece	10	1.45%	3.39%
Germany	5	.73%	1.69%
Remaining Countries, 18..	52	7.54%	17.63%
Total	295	42.75%	

The most significant facts presenting themselves in Table II are that 57.25 per cent of this group of 690 cases were American born and 42.75 per cent foreign born. Of the American born, Michigan contributed 35.4 per cent, or approximately only one-fifth of the total group. The Southern states contributed 29.2 per cent, or one-sixth of the total group, while all of the remainder of the United States contributed the same number as Michigan. (Southern states—those states south of the Mason-Dixon line and east of the Mississippi River.)

Of the foreign born, Poland contributed by far the greatest number, namely 103, or 14.93 per cent of the total group or approximately one-third of all of the foreign born. This number was more than three times as many as from any other foreign country.

TABLE III. DIAGNOSIS

(Total Group—690)

	No. Cases	Per Cent
Schizophrenia	168	24.35%
Schizophrenia paranoid	178	25.80%
*Syphilis	150	21.74%
†Alcoholism	63	9.13%
Manic depressive	53	7.68%
Paranoia	23	3.33%
Epilepsy, Mental Deficiency and other somatic diseases	55	7.97%

*Where the diagnosis of syphilis is recorded, it means all types of cerebral or central nervous system syphilis, whether it be parenchymatous, meningo-encephalitic, vascular or cerebrospinal.

†Alcoholism denotes chronic alcoholism, not acute.

In Table III, it is especially noteworthy that more than 50 per cent of the total group were schizophrenic and of this schizophrenic group 178 were schizophrenia paranoid, slightly more than 50 per cent of the schizophrenics and one-fourth of the total group. (It is interesting to note that ninety-eight or 26.92 per cent of the total schizophrenic group were married.)

TABLE IV. SCHIZOPHRENIC-PARANOID CASES

	No. Cases	Per Cent
American born..	92	23% of American born
Polish born....	41	39.8% of Polish born
Russian born....	15	46.8% of Russian born
Italian born....	7	28% of Italian born
Austrian born..	7	35% of Austrian born
Hungarian born.	7	50% of Hungarian born
Grecian born...	5	50% of Grecian born
Others	4	4.40% of all others

Of all the schizophrenia paranoid in the lower numerical groups, Greece and Hungary led, each presenting one-half of their total number as paranoid schizophrenics. In the higher numerical groups, Russia and Poland far exceeded the others. Out of 103 Polish patients in the total group, forty-one, or 39.8 per cent of all of the Polish born were paranoid schizophrenics. Not recorded in the table but an important finding was that thirty-two of the total American born paranoid schizophrenics were from the Southern states, or approximately 35 per cent. This observation assumes considerable importance later in the article.

Inasmuch as of all of the various industries represented in this total group, the automotive industry provided 371, or 54 per cent, Table V was deemed of import.

TABLE V. AUTOMOBILE FACTORY WORKERS

Total Number—371 (54 per cent)

	No. Cases	Per Cent of Total
Schizophrenic paranoid	72	19.4 %
Schizophrenic paranoid, American born	46	12.40%
Schizophrenic paranoid, Polish born....	20	5.39%
Schizophrenic paranoid, Russian born..	4	1.08%

The statistics in Table V, at first glance, may not seem at all startling. However, when one takes into consideration that 19.4 per cent, or approximately one-fifth, of all of the automobile factory workers present the same psychotic picture, namely paranoid schizophrenia, these figures do assume importance and seemingly point to a very reasonable conclusion. This table indicates that, of the Polish born automobile factory work-

ers, twenty, or 50 per cent, present the same psychotic picture, paranoid schizophrenia. In the Russian group, four out of fifteen Russian automobile factory workers present the same psychotic picture, namely paranoid schizophrenia. True, four represents but 1.07 per cent of all of the automobile factory workers, but it also represents 26.67 per cent, or slightly more than one-fourth of all of the Russian automobile factory workers.

Perhaps the question arises in the minds of some as to why the writer has selected paranoid schizophrenia cases as the material for Tables 4 and 5 respectively. The reason should be quite apparent. When it must be remembered that all of the schizophrenic psychotic types were considered, the manic groups, alcoholic, syphilitic, epileptic, somatic, mentally deficient and all other encephalopathic groups, that one psychotic picture should so predominate as to crowd into the background all of the others, the reason for selection of paranoid schizophrenics for these tables must be quite obvious.

TABLE VI. AUTOMOBILE FACTORY WORKERS
DISCERNIBLE TRAUMATIZATION

(Number of Cases—371)	
Traumatized by Lay-off	41
Traumatized Injury and Other Types of Trauma.....	150
Total Discernible Trauma.....	191
Percentage of Total Discernible Trauma....	51.5%

Table VI shows as nearly as is possible the actually discernible cases of trauma in the automobile factory workers' group. 191, or 51.5 per cent of the group, gave definite evidence of trauma. Included in the term trauma were actual physical injury, alcohol, illnesses and psychic trauma occasioned by being laid off from work.

Especial attention will be called to Tables IV, V, and VI, respectively, in the final summation.

It is incumbent upon each community to care for its mentally afflicted, or ill. However, the community's problem is barely started when it pays a certain stipulated sum to aid in maintaining one, or a number, of its members, in a mental hospital.

When the committed individual is the only or principal wage-earner in a family, the additional burden upon the community of necessity increases manifold times. Table VII reveals to a partial degree this addi-

tional responsibility thrust upon the community.

TABLE VII. TOTAL GROUP—690

Single	328
Married	286
Widowed, Separated or Divorced.....	76
Child Dependents of married group.....	771

The reason the writer stated that Table VII reveals only a "partial" picture is because there was no accurate way of knowing how many of the single group supported families nor how many of the divorced, separated or widowed group supported families before hospitalization.

It is, therefore, quite obvious that instead of our basic group, namely 690 patients, to be cared for by the community, we actually have well in excess of 1,461, for the 771 dependents listed were "child" dependents. The number of mothers left dependent upon the community was not included in the 1,461 because a certain percentage of the mothers would be forced to seek some type of employment, however slightly remunerative that employment might be.

TABLE VIII. DEPENDENT CHILDREN—NATIVITY
(Total—771)

Dependent Children	No. Cases	Per Cent of Total
Michigan born	93	12.06%
Southern States	118	15.3 %
Remainder of U. S.	94	12.19%
Foreign born	466	60.45%

Here we find a situation presenting itself in which the figures bring out astounding information. Of a total of 286 married patients, 132, or 46.2 per cent of the total married group, were of foreign birth, while 154, or 53.8 per cent, were born in the United States; yet this 46.2 per cent foreign group contributed 466 dependent "children," or 60.45 per cent of the total dependent children group, while the state of Michigan contributed only ninety-three dependent children, or 12.06 per cent of this particular group, less than one-fifth as many as the foreign born married patients contributed.

TABLE IX. LUETIC GROUP

(150—21.74 per cent of Total Group)

Married	85	57.67%
American born, married..	55	64.71%
Foreign born, married...	30	35.29%
Child dependents	140	
Total American born.....	93	
Michigan born	24	
Southern States	32	
Remainder of U. S.....	37	
Total Foreign born.....	57	

In Table IX are merely compiled some statistics concerning 150 patients in the total of 690 who were committed to the institution in whose cases some form of chronic syphilis was the cause for commitment and whose subsequent examination attested to the fact that they were afflicted with some form of chronic syphilis of the brain or central nervous system. It is noteworthy here that of the total number of American born patients falling in this group, namely ninety-three patients, only twenty-four were natives of Michigan, or only 16 per cent of the total luetic group.

This table was included in view of the present educational campaign being carried on in an endeavor to educate the public concerning syphilis.

Of what value are all of the foregoing statistics and tables?

The writer cannot help but feel that certain obvious questions and answers present themselves for consideration.

Let us first consider the information submitted from a purely statistical standpoint. Table II, or the Nativity Table, reveals Wayne County and the State of Michigan carrying a burden in a tax supported institution, to which burden the county and state themselves contribute only 20.28 per cent of the total group and only 35.4 per cent of the American born group. Table VIII reveals that, of the dependent children group, Wayne County and the state of Michigan contribute only 12.06 per cent of the total dependent children group while the dependent children group of the foreign born constitute 60.45 per cent.

It would appear then that Wayne County and the state of Michigan are bearing a tremendous burden which it is incumbent upon them to bear but which reveals itself as an acquired burden rather than a native one.

If this condition obtains in one city of our country, of necessity it obtains in other cities scattered throughout the length and breadth of the land.

Tables III, IV and V, purely psychiatric diagnostic tables, are perhaps the most interesting ones in this article.

They reveal the fact that the predominance of one particular type of psychosis, namely schizophrenia with paranoid implications forces any observer to either wonder or draw certain conclusions for himself or herself. Why are one-fourth of our total group of 690 patients presenting a psychotic

picture in which the outstanding feature is their sameness? Why is it that one-fifth of our total automobile factory workers' group presents a similar psychotic picture, namely schizophrenia with paranoid implications? Are we dealing with a peculiarly alike, comparably conditioned, homogeneously heritaged, identically environed group of individuals? Perhaps it is that we are.

We do find certain characteristics common to almost all of this group. We find that for the most part they have come to a large industrial city from a more or less rural community; from the plantations and cotton fields of the southern part of our own country or from the broad, placid farm lands of central Europe, Poland and the Balkan States.

Let us take a typical case of one of our patients from central Europe. He is born into a family of perhaps the poor working peasant type, whose heritage for countless generations has been to till the soil, or at least to live a quiet, evenly-modulated type of life. Even though relatively poor, measured by the yardstick used in this country, they still, for the most part, have a small farm or parcel of land belonging to their family, which has been handed down to succeeding generations. To this individual, that small piece of property symbolizes a certain amount of independence, perhaps the only symbol of independence. However, the lure of so-called better living conditions and increased wages attracts this individual to America. He hears of dynamic Detroit or bustling Chicago or any one of countless other cities. He comes here, obtains employment in an automobile factory amid strange surroundings, new people and an unfamiliar type of work.

He makes what mistakenly is interpreted as being a good adjustment to a new situation. He remains industrialized for several years in the same place of employment. He saves a little money and puts it into a small piece of property, perhaps building a garage type of home on the back section, having in mind a more permanent type of dwelling to build later to care for his rapidly increasing family. He is a robust, healthy individual when he starts. Perhaps a slight period of depression comes along. Perhaps times remain uniformly pretty fair. He is making regular payments on this property so symbolic to him.

However, there is a lay-off from work,

perhaps a short one for inventory, perhaps a longer one for changing models or because production orders are filled. Here, a definite trauma ensues. He has been making money enough to meet his current obligations while employed; perhaps he has been sufficiently provident to have saved a few dollars. With no income coming in but a very short time elapses before his little bank account is depleted. He cannot now meet his current obligations or his payments on his home. What happens? He either loses his home or is seriously threatened with the loss of it. The worry about losing his all and his inability to provide adequately for his family cause a tremendous psychic trauma.

He may be called back to work before the worst comes, namely actual loss of his property. Production is going now at a tremendous rate of speed, day shifts, night shifts, with thousands of cars manufactured each day and tens of thousands of men endeavoring to keep up a heart-rending pace. But fear has left its stamp on our individual. He knows how closely he came to actually losing his home and he realizes now just how close his escape was, how very easily he might have lost everything. He now finds more things of which he feels he has occasion to fear. "Supposing I lose my job? Supposing I sustain some disabling injury? Supposing I do not please my boss or in some way displease or offend him?" Cannot you feel these thoughts harassing, worrying this individual? Perhaps his work does fall off because of the tremendous load he is endeavoring to carry. He comes to fear industry—it is so all-powerful, so overwhelming he cannot comprehend it. He only knows what it is capable of doing to him; he fears what it may do to him. Is it any wonder this individual, whose heritage through many generations has been to till the soil, to be the village blacksmith or the town shopkeeper, should break under this fearful strain? Is it not to be marvelled at if he does not break?

The writer does not care to, nor would he be sufficiently temeritous, to quarrel with the psycho-analytical school of thought in their dynamics of various types of psychosis, let us say the formation of paranoid delusions in the schizophrenic. Do we have to go to psycho-analysis to find a perfectly reasonable, sane, scientific explanation in this case or comparable cases? Is there any one force in the world so devastating in its

effect upon man as fear? What force so impelling as fear? What stimulus so frightful in its consequences?

Let us not fail to see the forest because of the trees! Projection mechanisms, distortion mechanisms, defense escape mechanisms, all of the other isms, fixations, complexes and all of the gamut truly have a part in our picture of paranoia and paranoid thought, but there are times when the simplest explanation is the truly applicable one.

A panacea! Who can prescribe one? Partial solutions, some workable at the present time, others impossible under present existing conditions, present themselves.

To institute remedial measures at the very fountain head of the present difficulty would take many, many years of sustained endeavor. This is especially true if one adopts the view that the primary reason for so many mental upsets among this industrial class is because of inability to adequately adjust under situational factors to which they have been poorly conditioned.

Just as eventually it is to be hoped that in our school educational system every child shall have the advantage of examinations and observation by trained observers, namely psychiatrists and psychologists, having in mind some guidance or suggestive influence directing the child toward that vocation in life for which its potentialities and capabilities peculiarly or best fit it, so eventually we may look forward to the same principles being applied to our industrial educational system. Perhaps we will then find fewer round pegs endeavoring unsuccessfully to fit themselves into square holes.

The poorest musician may have made the most excellent cabinet maker, or the inadequate production line man may have been a splendid stock-room clerk. Some may consider this partial solution far too Utopian in its fundamental aspects. However much this plan may have to be modified, it is a step forward in the right direction.

There will be many who will feel that adequate adjustment would be almost impossible for anyone under present existing conditions. They will see the picture in this light: an individual traumatized physically and mentally for seven or eight months of each year by being driven at terrific rates of speed, then being traumatized mentally for four or five months by being laid off, with its accompanying worry as to ability to meet necessary expenses and the uncertainty of

when work will be available to him again and the additional fear of the unlimited power of industry, power so unlimited as to be incomprehensible to this individual.

Such a viewpoint has certain merits. But remedial measures can be instituted and that situation rendered more innocuous.

A thought comes to the writer's mind that perhaps a plan could be evolved whereby industry, either of its own volition or under some other gentle suasion, could endeavor a plan whereby their production could be pro-rated through ten or eleven months of the year, during which months their employees could be worked at a rate of speed sufficiently reasonable so as to cause little or no trauma, or at least a minimum of trauma. Think of the different attitude such a plan would engender among thousands and thousands of not only actual employees, but among their families also. Think of the different community feeling, the spirit of friendliness possible between neighbors, not possible at the present time! A new type of employee is thus created; he is not so fatigued at the end of the day that he finds no time nor capability for family recreation and he can tackle his job on the next day with a zest and a spirit formerly foreign to him. Gone is the feeling of insecurity, and a feeling of kindliness, friendliness and understanding supplants the for-

mer feeling of fear of industry's power. A happier employee, therefore a more valuable one to his employer, is created—and a happier family in a happier community.

Seed of dissension, mistrust, suspicion and hatred cannot thrive, cannot even take root in such soil. A new era has been born, new for industry, new for the employer, new for the community.

Mental upsets are not the products of happy, healthful, sane living. They are the products of worry, fear, insecurity, suspicion, physical trauma and feelings of futility and of inadequacy. Is it not reasonable to believe that we may expect a diminution in the number of unfortunates to be cared for in various mental hospitals and an ever greater diminution in our various welfare and relief rôles?

The writer has tried very hard not to color this article by his own personality or feelings. As a scientific treatise, facts and figures must speak for themselves. He only hopes that in addition to acquainting you with the foregoing statistics he may have further stimulated constructive thought along some remedial lines or toward some solution.

To the Moses who can lead us out of this present wilderness of social and industrial maladjustment into a Canaan of understanding, and healthful, sane living, society will owe an undying debt of gratitude.

PROBLEMS IN SEVERE HYPERTHYROIDISM*

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Patients with severe forms of any disease usually require special consideration and in this regard those with severe hyperthyroidism present a particular challenge, since with the utmost in judgment and technical skill a great many of them may be restored to normal living. Purely on the basis of avoiding mortality, interest may well be placed upon two groups: (1) those having or likely to develop thyroid crisis, and (2) those in which the thyroid intoxication has produced or accentuated a pre-existing heart disease. These two conditions will be discussed:

Thyroid Crisis

Statistics show that thyroid crisis generally accounts for more than half of the deaths from goiter (Table I).

It is the rule that most of these deaths occur pre-operatively,¹⁰ before the patient

*From the Department of Surgery of the University of Michigan. Presented before the Surgery Section of the Michigan State Medical Society, Detroit, September 26, 1938.

TABLE I.

	Per cent of goiter mortality due to thyroid crisis
Lahey Clinic ¹	40
Long Island College Hospital ²	60
Mayo Clinic ³	50+
University Hospital ⁴	70

can be improved to the point of even considering an operation. From this, it is evident that the treatment of thyroid crisis is

most unsatisfactory; no specific measure is available and general supportive therapy usually fails to carry the patient through a severe reaction. To avoid thyroid crisis is most important.

Factors Precipitating Thyroid Crisis

From a review of fifty-one pre-operative deaths from thyroid crisis, Bayley² presented the precipitating factors, and these are well worthy of brief consideration here.

Crisis precipitated by extra-thyroid surgical procedures.—In six cases an elective operation other than upon the thyroid gland precipitated the crisis. These operations included a posterior resection of the rectum, a hysterectomy, a cholecystectomy and appendectomy, and a patient in whom all the teeth were extracted. The hyperthyroidism in these patients was mild, but its potential danger and the need for taking care of hyperthyroidism before elective procedures is well apparent from the fatal results. The occurrence of thyroid crisis after these operations refutes the old belief that manipulation of the thyroid gland at the time of a thyroidectomy is the cause of thyroid crisis. No such manipulation is needed to stir up this severe complication.

Crisis precipitated by infection.—Eight of the fifty-one patients had an acute infection as the factor precipitating the crisis. A severe sore throat with marked discomfort occurred in three of these and the sedative given failed to provide rest.

Crisis precipitated by therapeutic and minor diagnostic procedures.—In nine of the 51 cases a simple procedure—a paracentesis, a thoracentesis, a spinal puncture, a basal metabolic rate determination—instituted the storm. That a metabolic rate determination may be the upsetting factor shows what a narrow margin of safety exists in many of these patients and how disturbing a routine procedure may be in individual cases.

Patients in whom earlier or more intensive treatment may have averted crisis.—Nineteen of the fifty-one cases were in this group. In seventeen of these it was apparent that rest was not obtained, the patients having spent several consecutive sleepless nights before the crisis began. The records showed that sedatives were given in considerable amounts, but that they failed to produce

results. With the insomnia, apprehension and hyperactivity led to the crisis.

Cases admitted in crisis.—Eight of the fifty-one patients had well developed crisis upon admission to the hospital. More than one of these first entered the Neurology Service, because they were irrational or comatose when first seen. All were dehydrated and emaciated, and death usually came within three or four days.

The precipitating factors of the previous paragraphs emphasize some of the difficulties encountered in the care of patients with severe hyperthyroidism. The important lesson is that hyperthyroidism should not be permitted to progress to the severe stage. The physician must recognize the potentialities of this disease and adopt suitable treatment in its incipency.

In dealing with severe hyperthyroidism certain measures have been found to be most effective. These can be discussed under: (1) the recognition of severe hyperthyroidism, (2) careful pre-operative preparation, (3) multiple stage operations, and (4) good postoperative care.

Recognition of Severe Hyperthyroidism

In dealing with this condition, to be forewarned is to be forearmed, for one must early recognize that severe hyperthyroidism exists and then institute proper care. An important decision to make is whether or not multiple-stage operations should be done, since it is very easy to do too much surgery on these patients. Lahey's⁶ opinion in this regard is well worth quoting:

"Our formula for low mortality rates has always been to assume that if a patient died after subtotal thyroidectomy he would probably not have died had we performed a two-stage subtotal thyroidectomy, after a right first-stage subtotal hemithyroidectomy, sending the patient home for six weeks and then having him return for a left subtotal hemithyroidectomy. Should a patient die after a right first-stage hemithyroidectomy, we contend that patient would probably not have died after a preliminary pole ligation, and, should a patient die after preliminary bilateral pole ligations, the patient would probably not have died had but one superior pole been ligated and the other pole ligated a week later."

Experience with severe hyperthyroidism soon convinces one of the significance of this opinion, and the publications of Lahey and his associates in this regard are commended.

Evidence leading to the recognition of severe hyperthyroidism and to the decision

for multiple-stage operations can be logically considered under evidence on admission, evidence during the preparatory period and evidence during the operation.

Evidence upon admission.—Lahey⁷ has emphasized the importance of the examination at this time. The patient has had no rest and is not under sedatives, and the findings are at their worst. The observer here has the best opportunity to decide on the seriousness of the disease.

Tachycardia has been stressed as the best single standard of severe hyperthyroidism. With a pulse rate of 120 per minute, more than a moderate degree of hyperthyroidism should be suspected, and if above 130, severe degrees are present and the need for multiple-stage operations strongly suggested.

Weight loss of 30 to 50 pounds signifies an increase in metabolism of immoderate amount and also of long duration. Many patients with hyperthyroidism have a voracious appetite which permits only a slight loss of weight. With severe disease the patient often cannot keep up with his metabolic needs, and in others, anorexia sometimes occurs and weight loss becomes even more marked. The mortality is high among patients who have lost considerable weight.

The duration of the disease is important. The human body cannot stand hyperthyroidism for long periods without irreparable damage. Energy reserves are reduced, nervousness is more marked and uncontrollable, and pathologic conditions become chronic—such as patchy chronic parenchymatous interlobular hepatitis described by Weller.¹⁴ Of the thirty-seven deaths from thyroid crisis reviewed by Ransom and Bayley,¹³ the average duration of the thyrotoxicosis was twenty-eight months. Eleven of the patients had a history suggesting hyperthyroidism for ten years or more. With long duration, the breaking point is imminent and every strain should be lessened or divided.

The development of a psychosis is always a bad sign in hyperthyroidism. Hallucinations, incoherent speech and delirium are such common features of thyroid crisis that if an actual crisis is not present with these mental aberrations, then it is impending and every effort should be made to ward off a severe reaction.

Advancing age plays a part. With increasing years caution is needed, for the older patients cannot stand strains that are

tolerated by the younger. Adolescent patients with thyroid crisis sometimes survive; the older ones invariably do not. Age, then, demands a closer consideration of all the factors of caution.

The basal metabolic rate is not a good indicator of the severity of the hyperthyroidism. Often the initial rate is too high because the patient is new to and afraid of the test; consequently, subsequent tests are more revealing. A second fact is that, with patients who later develop thyroid crisis, the basal metabolic rates are often within the moderate range of +30 to +50 per cent. As a true indication of the severity of the hyperthyroidism less reliance should be placed on this test than on the factors of tachycardia, weight loss, duration of the disease, psychosis, and age of the patient.

Evidence during preparatory period.—Failure of the patient to respond to preparatory treatment is an important sign that serious hyperthyroidism is present. This may be shown in several ways. The patient may continue to be hyperactive and easily excited. There may be a failure to gain in weight in spite of a high caloric intake. The pulse rate and the metabolism may not decrease, in some cases it may even increase. Lerman⁸ found that the mortality in patients who were iodine-resistant, that is, who failed to show a decrease in metabolic rate with pre-operative iodine therapy, was 24 per cent, compared to 1.1 per cent in the patients who satisfactorily responded to iodine. As a further evidence of failure of response the patient may become irrational or may develop gastro-intestinal disturbances, diarrhea, nausea and vomiting. All these features are further indications of a severe hyperthyroidism and they call for caution in the operative treatment, which means dividing the operation into multiple stages.

Evidence during operation.—It is always better to have a definite idea of just how much surgery is to be done, before the operation begins, since at the time of the operation one may be led astray by the patient's seemingly good condition under the narcotics and anesthetic, and thus do too much surgery. There are, however, a few instances in which a definite opinion is difficult to make pre-operatively. While the condition of any patient during an operation is

always important, it is doubly so in these patients, since various factors are looked for and quickly used as indicators for shortening the procedure. A progressively rising pulse, 150 per minute and above, is a sign for caution, as is also a widening pulse pressure. Cyanosis should be particularly avoided, since these patients react very poorly to long periods of anoxemia. If the anesthetic has not been satisfactory, if the patient coughs and struggles, then the operation should be shortened. If technical difficulties have seriously prolonged the first half of the operation or have resulted in excessive hemorrhage, a resection of the second lobe should be left until later. Multiple-stage operations lengthen the period of treatment, but, most importantly, they reduce mortality.

Pre-operative Preparation

The need of the patient with severe hyperthyroidism for quiet and rest cannot be overemphasized, since all other forms of therapy will fail if this is not obtained. Sedation of some degree is almost invariably needed, and in this regard the barbiturates as a group are most satisfactory. For the extremely restless patient, paraldehyde in moderate doses is quite effective, and occasionally even pantopon or morphine is needed.

Fluid intake should be kept at a minimum of 3,000 c.c. daily. The diet should be of high caloric value and rich in carbohydrates, the latter needed to maintain glycogen reserves, which are easily depleted in these patients. When anorexia is present, intravenous glucose is a valuable adjunct therapy. It is our custom to administer iodine in the form of Lugol's solution 0.3 c.c. three times a day to all patients having hyperthyroidism. This is purely a procedure preparatory to the operation, since it is known that iodine therapy over long periods of time is distinctly harmful. In the study of Potter and Morris¹² prolonged iodination was considered to be productive of "iodine-resistance" in 40 per cent of the patients.

Digitalis is given to patients with congestive heart failure and those with auricular fibrillation. Basal metabolic rates are taken every five days after admission. Special studies include an examination of the larynx for evidence of recurrent nerve palsy. Occasionally, a paralysis will be found

even when there has been no previous thyroid surgery. Roentgenograms of the chest are taken for evidence of substernal goiter, tracheal deviation, and tuberculosis. Some of the features of hyperthyroidism are similar to those of tuberculosis, and the possible error should be avoided. An electrocardiogram is taken on all patients having heart disease.

Multiple-Stage Operations

These procedures are life-saving measures to the patient with severe hyperthyroidism. But it must be remembered that they are not necessary for the average case of hyperthyroidism, and are to be adopted only with good reason, such as the indications discussed under "the recognition of severe hyperthyroidism." In decreasing order of magnitude, one progresses from a subtotal hemithyroidectomy down to a single superior pole ligation. Certainly, when activation is intense, when the patient is losing ground in spite of the most careful preparatory treatment, then the least formidable operative procedure, a unilateral superior pole ligation, should be done. The time between pole ligations is usually seven to fourteen days. Four to six weeks later, a right subtotal hemithyroidectomy is done, and after the same interval a left subtotal hemithyroidectomy. When a multiple-stage program has been decided upon, and progress during the preparatory period has been fairly good, then one commonly starts the operative treatment with a subtotal hemithyroidectomy. During the interval of 4 to 6 weeks, the patient is usually sent home on supervised treatment similar to the preparatory treatment. Progress at home is generally excellent and the subsequent left subtotal hemithyroidectomy is commonly uneventful. Recently, we have employed the "short-interval" of seven to ten days between the subtotal hemithyroidectomies and have found it to be quite satisfactory. McGraw⁹ discussed the merits of this interval compared to the four to six weeks period, pointing out the latter to be more expensive and occasionally failing because of lack of co-operation by the patient.

Postoperative Care

The postoperative period for many patients with hyperthyroidism is a critical time in which efforts are mainly directed towards

avoiding thyroid crisis. Fortunately, the premonitory signs of an impending crisis are rather definite, restlessness, a rising temperature and pulse rate being important indicators of trouble. One should not wait for these signs to develop but should ward them off by proper treatment. Sedation is needed to keep the patient quiet, and, for the first day or two, control of discomfort is also necessary. For this period, pantopon in 0.022 gm. ($\frac{1}{3}$ gr.) doses (H) works well in our hands. No routine order should be written, but amounts should be given to obtain rest. This means frequent visits to the patient by some responsible member of the staff. Even if respirations are decreased by the frequent use of this opium derivative, oxygen can be given to keep the patient a good color. The barbiturates are resumed on the second postoperative day. Occasionally, stronger sedation is required, and for this paraldehyde in small amounts rectally is an admirable drug.

The development of fever in the immediate postoperative period by patients with hyperthyroidism is a strange phenomenon which does not appear so unaccountably in any other group of patients. It has been likened to the fever occurring with liver shock, and, while disturbance of liver function is known to occur in patients with hyperthyroidism, it has been impossible to prove that the fever is due to liver damage.¹⁰ In any event, a high fever is to be avoided and the liver is to be protected. Since the fever in hyperthyroid cases tends to rise rapidly, it is our custom to record the patient's postoperative temperature every one or two hours, depending upon the severity of the disease. In this way, we become aware of a rising temperature and take measures to keep it within moderate limits, which is 100.0 to 101.0° F. To reduce fever, ice bags are first applied; if necessary, an alcohol sponge is given. If these are not sufficient, then 1.3 grams of acetylsalicylic acid are given by mouth, and may be repeated in one hour. The cooled atmosphere of the oxygen tent is a valuable aid⁴ in keeping postoperative temperatures within moderate limits. Also, the maintenance of a high degree of oxygenation by this procedure is of such great benefit that all patients with severe hyperthyroidism are placed in an oxygen tent immediately upon their return from the operating room.

A plentiful supply of carbohydrates is important to the postoperative patient with hyperthyroidism for at least two reasons. In the first place, these patients deplete their glycogen reserves quickly, and, secondly, they show rather high degrees of impaired liver function,^{5,10} particularly in the immediate postoperative period. In general the patients with severe hyperthyroidism cannot be depended upon to ingest sufficient carbohydrate by mouth for at least two days, so one is well advised to give intravenous glucose continually during this time. We have used 10 per cent glucose in distilled water for this purpose and generally administer from 150 to 200 c.c. per hour. Studies¹⁵ have shown that at least 90 per cent of this dextrose is retained, and that the water remaining is available for all purposes.

On the day of the operation, 2.0 c.c. of Lugol's solution are given intravenously by simply adding it to the ten per cent glucose. On succeeding days, 0.3 c.c. are given by mouth three times daily. Laryngitis and tracheitis are frequently troublesome in the immediate postoperative period and are usually ameliorated by menthol and steam inhalations. In several instances of thyroid crisis, pulmonary edema has developed¹⁸ with the raising of considerable amounts of a blood-tinged frothy mucus. In two cases, frequent aspirations kept the trachea clean and greatly aided the patients' recovery. Other medications, such as digitalis, are continued postoperatively as pre-operatively.

In final consideration of postoperative care, the value of good nursing is to be commended, since the benefit to be derived from such skillful service is inestimable, particularly when dealing with the apprehensive patient. I have seen lives saved by an intelligent nurse obtaining the confidence of the patient and leading her quietly through the trying hours, whereas previously narcotics and sedatives had to be forced to a dangerous level.

The Thyrocardiac

This term is used to denote the patient with thyroid disease whose symptoms or findings are predominately cardiac in nature. With increased metabolism there exists some increase in circulatory demands, and in time this results in some enlargement of the heart, most of which is due to car-

diac dilation and generally only slightly to cardiac hypertrophy. Some further cardiac dysfunction is thought to be due to an acute thyroid toxemia.¹ Under forty years, the effect of the increased cardiac load and the toxemia are fairly well tolerated, but in older individuals serious heart trouble is often instituted or some pre-existing heart disease is exaggerated. Cardiac pathology may have been present from previous rheumatic fever or there may be varying degrees of hypertensive or arteriosclerotic heart disease. The stimulus of hyperthyroidism upsets the reserve and the signs of decompensation appear. Auricular fibrillation is extremely common in this group, a few summaries estimating this arrhythmia to occur in 85 per cent of all cases of congestive heart failure with associated hyperthyroidism. Conversely, when auricular fibrillation is present, one should strongly suspect hyperthyroidism and carry out suitable studies.

The treatment of these elderly patients is far from hopeless. One should continually bear in mind that although their reserve is limited, they can stand considerable if it is not all applied at one time, that is, moderation is needed. The features discussed under pre-operative treatment are applicable here. Rest, Lugol's solution, a high caloric diet and digitalis are needed. A mercurial diuretic may occasionally be necessary to handle edema. Glucose solution to provide a high carbohydrate intake is valuable, with the caution to keep the total fluid intake at a moderate level. Multiple-stage operations are important in the care of these patients. Usually, pole ligations are not needed, since the degree of hyperthyroidism is generally not excessive, but a right hemithyroidectomy, followed by a left hemithyroidectomy

will often do wonders for the more seriously ill members of this group. In about 90 per cent of the patients with auricular fibrillation, this arrhythmia disappears within a week after the operation. Occasionally, quinidine is needed to set the rhythm right. The remaining patients continue to fibrillate, but are much improved and get along well for some time.

In conclusion, one can reemphasize that in the care of patients with severe hyperthyroidism, as in the care of patients with other serious diseases, consideration of the special problems presented goes a long way towards avoiding the serious complications and leads to a reduction in the mortality and to the returning of more individuals to a life of normal activity.

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LEAD IN DRINKING WATER

Instances of lead poisoning resulting from dangerous concentrations of lead in water from newly installed water pipes and plumbing fixtures have been reported, according to Dr. Carey P. McCord, Director of the Bureau of Industrial Hygiene of the Michigan Department of Health. Recent studies, Dr. McCord states, indicate that the most common source of lead in this water is from lead-containing "dopes" that are used for sealing the pipe joints, and he urgently suggests that the use of such "dopes" be abandoned and one of the several non-lead containing materials be substituted. The quantities of lead found in water that stood in the pipes of new installations for some time ordinarily were not sufficient to produce illness in adults consuming average amounts of water each day, but these same quantities were capable of producing digestive disturbances in infants. However, should adults drink large quantities of such lead-contaminated water for a period of time, harmful effects to health might result.

To insure the use of water free from harmful amounts of lead, Dr. McCord advises that, during the first month after new plumbing equipment is installed, water should be allowed to run from the tap for a few minutes each time before it is drawn for drinking or culinary purposes.

LOW BACK PAIN

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Low back pain has been called rheumatism, lumbago, arthritis, and many other things. The most satisfactory general term is still *low back pain*. In recent years, this has been split down into more specific entities which have been worked out on definite clinical, anatomical and roentgenological findings. These specific entities have definite diagnostic terms and their treatments have been carefully and satisfactorily planned.

The most valuable aids in establishing a diagnosis of diseases and injuries which produce low back pain are a detailed history and a routine systematic physical examination.

A typical history is briefly as follows: A vigorous young man in his thirties felt something "snap" in his lower back while lifting a heavy weight from a bending position. He immediately experienced pain in his lower back. Sometime later he developed pain in the buttock radiating down the back of one thigh and leg to the outside of his foot. Coughing or bending increases the radiating pain. There may have been two or three previous attacks, the first ones relieved by rest in bed varying from three to ten days. The last attack has persisted.

A history of this sort raises the possibility of merely a simple sprain of a lumbosacral joint that has not received adequate rest. Or it may fit into any of the low back pain entities which can only be determined by a very careful and complete physical examination, including a search for foci of infection, neurological tests, certain laboratory tests as well as a complete orthopedic checkup in the standing, sitting, as well as the prone position.

There have been many articles dealing with the detailed history-taking and examination of patients with low back pain. Therefore, I feel any consideration of that in this paper, to be merely superfluous. The most recent series of articles is in the December, 1938, issue of the *American Journal of Surgery*. Those interested would do well to read these, especially the article "Examination of the Injured Back," by Dr. John D. Ellis.

I now wish to take each of the following various low back entities in turn and give a few of the diagnostic points of each, as well as the treatment for them.

1. Sprains
 - a. Lumbosacral
 - b. Sacroiliac.
2. Functional decompensation or back strain.
3. Degeneration of the intervertebral disc:
 - a. Herniation of the nucleus pulposus
 - b. Fragmentation of the disc.

4. Hypertrophy of the ligamentum flavum.
5. Contraction of the iliotibial band of Ober.
6. Congenital anomalies.

Sprains

Lumbosacral joint disturbances are by far the most common. Acute sprains of the articulations and joints of this area occur most commonly in the younger adults following heavy lifting or increased athletic activities. Muscular individuals who have been at ease for a period of years and allowed their muscles to lose some of their strength; who then attempt some rigorous exercise or work commonly sprain (stretch or tear) the ligaments about the lateral articulations of the lumbosacral spine. This is brought about by rotation of the spine due to the rigidity of the anterior longitudinal ligament of the spine which, on the average, has a tensile strength of over 400 pounds. This acts as a stiff support which allows the spine to rotate about it rather than allow it to "cave in."

Diagnosis of lumbosacral sprain is relatively easy by the routine examination. There is a flattening of the lumbar curve, muscle spasm, limitation of motion on forward flexion as well as toward the side of the lesion, tenderness directly over the joint affected, and a frequent list toward the side affected.

Single straight leg (Lasèque's sign) raising is moderately free but double straight leg raising is markedly restricted and painful. Finally, routine back treatment of bed rest on a firm mattress, hot fomentations to the back, folded sheet in lumbar spine, knee flexion and sedatives usually relieve the pain completely. Adhesive strapping after a few days, followed by a front and back pad brace is usually sufficient in the private cases. In compensation cases, longer bed rest followed by a plaster body cast is the

most satisfactory treatment. Physiotherapy is of great importance throughout.

Sacroiliac sprains are not as common and are more apt to occur as a result of more severe trauma. Diagnosis here is by tenderness over the joint itself and by limitation of single straight leg raising (Lasègue's sign) on the side affected, whereas the other leg and double leg raising is much less painful. The treatment is the same as above, but a canvas belt with a pad in the back of it is used instead of the front and back brace of Goldthwaite.

In both these conditions, manipulation through a series of maneuvers is carried out to reduce any possible subluxation and break up any adhesions. In a small percentage of cases, these maneuvers give instantaneous cures.

Functional Decomposition or Back Strain

These are terms that represent an imbalance between the capacity of the structures of the back and the physiological demands made upon them. This implies an insufficiency of structure and resultant disability. This condition occurs in debilitated or generally run-down younger people and in obese, flabby elderly people. Poor posture with increased lumbar lordosis, rounded dorsal kyphosis and pendulous abdomen along with impaired muscle tone stamps the individual at first glance as one who expects too much of the ligaments and bones of his back.

The symptoms are generalized low back pain and tiredness, often associated with general fatigue. At first the pain is generalized and associated with stiffness on arising after resting. Later the pain localizes and may involve the lumbosacral area or a sacroiliac joint. This may go on to a true arthritis.

Treatment concerns itself with general upbuilding of the muscular system by exercises and the reduction of obesity by diet. Foci of infection are eradicated. Generally a low metabolic rate and low blood pressure are present, as well as secondary anemia. Thus, thyroid, iron and vitamins are given. Adhesive strapping, reinforced corsets or even body casts are occasionally necessary.

Degeneration of Intervertebral Discs

Degeneration of the intervertebral disc occurs in two ways: (a) Herniation of the

nucleus pulposus; (b) fragmentation of the disc.

Herniation of the nucleus pulposus.—This occurs either through a break in the cartilaginous plate into the adjacent vertebral body (Schmorl's nodule), which is clearly shown by x-rays, or it may break through the annulus fibrosus into the spinal canal, causing nerve pressure and referred neurological changes down one leg. In this latter case the diagnosis should be suspected in persistent back patients who have sensory changes of the leg and foot in conjunction with absent Achilles' tendon reflex on the involved side. Spinal fluid total protein of 45 mgs. per c.c. or over is strong evidence of intraspinal pathology. Diagnosis is confirmed by intraspinal lipiodol studies under x-ray control, followed by laminectomy; which is the treatment as well as confirmatory diagnostic test. Spinal fusion in these cases is usually advisable.

Fragmentation of the disc or cartilaginous plate: This occurs in later life and granulation tissue grows from the adjacent vertebral body into the disc. This portion of the disc is later replaced by fibrotic tissue. These degenerations, in themselves, are not painful, as there are no nerve endings in the disc (but there are nerve endings in the ligamentous tissue of the spine).

This degeneration of the disc results in narrowing, bringing the vertebral bodies closer together. If the posterior articulations do not slip past each other, a kyphosis is produced; a condition usually encountered in the dorsal or upper lumbar region. In the lower lumbar region thinning usually produces a subluxation of the apophyseal or posterior articulations, resulting in the following possible causes of localized or referred pain:

(1) Strain upon the ligaments of the articulations.

(2) A disturbance in the relationship between the articular surfaces that thrusts the lower vertebral body forward beneath the one above, so the intervertebral foramen is decreased in axial and also in anteroposterior diameter. This results in a fibrosis about the bundles which make up the nerve root, giving rise to symptoms of radiculitis.

(3) In extreme cases there may be actual bony impingement between the tip of the articular process and the pedicle above or lamina below, resulting in pain. This is

recognized by oblique x-rays, best made with the patient standing. Radiculitis is diagnosed by symptoms and signs along the nerve roots involved, as well as by x-rays. Treatment is rest either by bed, back brace, body cast or by spinal fusion.

Hypertrophy of Ligamentum Flavum

Hypertrophy of the ligamentum flavum needs little comment. Symptoms and signs are about the same as those of herniation of the nucleus pulposus. Diagnosis is made by intraspinal lipiodol roentgenographic studies and laminectomy. Treatment is excision.

Contraction of Iliotibial Band of Ober

Contraction of the iliotibial band and tensor fascia femoris muscle of Ober is not of great importance. The cases of low back pain that have the signs of this contracture are few, and, in most cases, the positive findings disappear on rest, manipulations and stretching exercises. The cases, in my experience, requiring operation are rare. Those patients that have refused operation did as well as those submitting to the extensive fasciotomy.

Congenital Anomalies

Congenital bony anomalies are not in themselves a cause of low back pain, but they predispose to a weakness of structure so that the ligaments are more easily strained or sprained.

Congenital anomalies of the piriformis muscle with pressure on the sciatic nerve are not apt to be diagnosed in the living patient.

Conclusion

Approximately 5 per cent of the low back pain patients receive surgery. There is another 5 per cent that should have surgery but have not because of refusal to undergo the operative procedure. About 90 per cent of low back pain cases are treated satisfactorily by conservative methods.

I have not mentioned sciatica. I believe true sciatica in the sense of a primary neuritis of the sciatic nerve to be so rare that it is not to be considered. The so-called sciatic pain is a referred pain from pathological conditions in the muscles, ligaments and joints of the lumbosacral and sacroiliac regions. The sciatic pain disappears on treatment of the pathology involved.

NERVOUS FACTORS INVOLVED IN SKIN DISTURBANCES

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This is a dangerous subject because it borders on the mystic and is at present so often a tool of the pseudo-scientist. It is a field which should be approached not from the old viewpoint of an alibi for ignorance or an excuse for the failure of treatment but studied with the hope of better understanding and improved therapeutic results. There is a definite basis on anatomical and physiological grounds for the contention that actual organic lesions of the skin may be produced by disturbances of the nervous system and its coördinate system of internal glands.

Man is a combination of trillions of single cells associated in colonies and tissues, or specialized in organs, or organ systems for functional efficiency. Some means of coördination of the activities of these various groups is necessary. Chemical communication through the body fluids occurs and is evidenced by the present knowledge of the effects of internal secretions. Whether any direct cell to cell interrelating function is possible is debatable. The essential coördinating agency of which we have any

knowledge is the nervous system. The life functions, assimilation, respiration, circulation, temperature control, and so forth, are maintained by an autonomic system of communication. This consists of nerve endings and fibers which connect the various viscera and the skin to nerve ganglia located in groups near the viscera or in the spinal cord and the subthalamic areas. Two groups of fibers are organized into systems, namely, the cranio-sacral and thoracico-lumbar, or, as they are sometimes called, the sympathetics and the parasympathetics. The two component systems are antagonistic

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and tend to balance each other just as the antagonistic voluntary innervation of muscles is balanced. The secretions of the endocrine glands may influence the functions of either of the component autonomic systems. When, by means of the intercommunication systems described, all of a man's tissues are in a state of harmonious function, we call this a condition of homeostasis.

Homeostasis may be disturbed by a number of factors. External stimuli transmitted reflexly disturb the function of all connected tissues; for instance, ice applied to a skin area of reference produces not only local vasomotor reactions but visceral vasomotor responses and in the hollow visci changes in peristalsis. Similarly, morphine injected in an organ's skin area of reference relieves pain more promptly and efficiently than when injected into the triceps muscle. Stimuli, if frequently repeated without sufficient rest periods, set up an increased irritability in the coördinating centers so that they respond to a stimulus usually below the threshold of response. The stimulus may of course be internal as well as external; for instance, a duodenal ulcer producing not only reversed peristalsis but changes in the skin reference field. The reflex system operates in either direction. The threshold of response may be further lowered by conscious attention; that is, a perception of a stimulus may be increased as much as fiftyfold. In this state sensations not ordinarily registered on the cortex reach consciousness. The endocrine glands may disturb homeostasis and since they are directly responsive to emotions the latter play an influential rôle. An emotion is the psychic accompaniment of motor reflexes automatically set up by external or internal stimuli. The psychic state follows the motor response and does not cause it. We can not think without a motor activity. This has been demonstrated by asking an individual to think or read without talking and recording tongue movements by alterations in the pressure of an inflated balloon held in the mouth or by holding a plumbline with a weight swinging pendulum fashion and noting the change in its course produced by thinking "round and round." Muscular activity, although it may be very slight, occurs with every thought.

Disturbances of function as vasodilation, vasoconstriction or altered peristalsis may as an effect of such disturbances of home-

ostasis become so frequent that organic changes of a permanent character occur. Capillary walls thicken, changes in circulation and cellular growth occur. Organ deficiencies independent of the original functional disturbance then perpetuate and increase the original difficulty. Family histories seem to indicate that such deficiencies may become hereditary and the constitutional hereditary deficiencies which we so often see are possibly frequently a result of such mechanisms. Physiological tests show certain characteristic findings in this group. In studies of the chronic neurodermatoses by William Becker and his associates, a large number of individuals showed increased mental activity, an increased inflammatory index, increased erythema time, lowered blood pressure, neurocirculatory instability and hypersensitivity, usually polysensitivity, to skin tests.

A disease is a complex syndrome arising from the adjustment of the organism to changes in its environment. This adjustment is made at least in part through the coördinating activities of the endocrine and autonomic nervous systems. The picture of disease will then be colored by the condition of these systems. Further, other disturbances of environment than parasites or chemicals may initiate such adjustments and the resulting picture be indistinguishable. In parasitic skin diseases a general type of response will be evident but the physical changes as edema, leukocytosis, vascular permeability, and so forth, will be varied just as the subjective symptoms are by the coördinating activities we have discussed. The expert dismisses such variations but the tyro may be misled in his diagnosis. All the previous discussion is merely an attempt to explain and understand why we must treat the individual and not the disease. It is an attempt also to show the complexity of even what we consider simple diseases and the inadequacy of our present knowledge of their mechanisms. Such an understanding will help us to cure scabies and impetigo, as well as such etiologically obscure conditions as lichen planus, urticaria, dermatitis herpetiformis, pruritus of idiopathic origin, scleroderma and atopic dermatitis. These latter diseases have been shown to be associated in many cases with definite constitutional types which are related to nervous dysfunction.

Despite the limitation of our knowledge,

we still may offer certain therapeutic suggestions. Drugs may be used for systemic relief of nervous factors complicating skin disturbances. Atropin in its various forms seems most helpful, or combinations of atropin with ergotamine tartrate or with small doses of phenobarbital. In the type of individual with a hypotension, ephedrine or amphetamine sulfates, or combinations of these with barbiturates, seem indicated. Dosage should be graduated but pushed to the point of individual tolerance. Iodine or arsenic are helpful in a few instances. Endocrine products are not usually of much value, but in mild hypothyroidism, thyroid, or combinations of thyroid with ovarian or pituitary hormones, seem advisable, and at the menopause the established gonadal stimulating hormones are indicated. Much more important than drugs, however, is an attempt to improve the patient's mental state.

We should inquire into the occupation, avocation and familiar environment of the patient with persistent difficulty, rationalizing for him his modes and attitudes toward life's problems as far as possible. The patient should be taught the necessity of relaxation, and adequate rest should be insisted upon. This means the patient must be taught how to relax and that he must realize that he must have much more rest than an ordinary individual. Once the background is known, the discussions of troubles or symptoms should be prohibited. Relatives should be cautioned against talk concerning the difficulties and the patient

should reply to questions about his health as salutations and not as inquiries. Thoughts concerning difficulties or unpleasantness can gradually be shut out if the patient will substitute a memory of some pleasant period of his life and elaborate his memories of that period each time an unpleasant thought occurs. Worry is a habit learned by practice, and if practicing is stopped, the habit is soon forgotten. Discussion of all emotion-arousing subjects, as religion, war, or economic or political problems, should be prohibited. The whole program must not be forced. Patients must understand that no strenuous will power is to be exerted but that any such effort will immediately destroy all benefits. It is of course axiomatic that the accepted local and general therapy for the skin disease concerned should be used, but attention to the nervous factors will often produce a cure when all such measures have been inadequate.

This paper discusses material involving the entire field of medicine, but I think that the skin is especially responsive to nervous disturbances and I believe that those treating skin diseases encounter an especially large number of individuals who belong in this group.

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CONGENITAL DEFICIENCY OF THE PERICARDIUM

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Congenital deficiency of the parietal pericardium is a rare anomaly. Moore⁸ collected sixty-four cases from the literature in 1925. Since that time eight cases^{1-7,9} have been reported in man and one case in a newborn orang-utan.⁴ The subject of congenital deficiency of the pericardium is of importance in yielding information as to the function of the pericardium, and because of the renewed interest in cardiac surgery (both cardiomyolysis and operations to increase myocardial blood supply).

Unfortunately, many of the reports of cases of deficiency of the pericardium are incomplete, and an exact analysis of all cases cannot be made. The descriptions are often so imperfect that the presence of the condition is doubtful, because of confusion with adherent pericardium. Once, the condition was diagnosed during life,⁷ an accidental finding at operation. All other instances of the condition were discovered accidentally,

as an incidental finding at autopsy; in no instance was the anomaly regarded as having exerted any influence during life or as having been responsible for death.

Moore⁸ classified the anomalies on the basis of a study of forty-two of the sixty-four cases reported in the literature: Group

I, those cases in which the heart and left lung occupy a common serous cavity, constituting 59.5 per cent of the series. This group may be further divided: (A) those cases in which there is a complete absence of the pericardium, and (B) those cases in which a rudimentary pericardium persists. Several cases in which there has been a large defect or foramen between the pericardium and the left pleura through which the heart has entered the left pleural cavity are included in subgroup B. Group II, those cases in which a foramen exists between the pericardium and left pleura, and the heart occupies the pericardial cavity; constituting 21.4 per cent of the series. Group III, those cases in which the heart maintains a normal relation to the two layers of the mediastinal pleura; either no trace of the pericardium is present or, as is most common, only rudiments of the pericardium are present near the base of the heart; constituting 19.1 per cent. Moore observed that in Group III there were eight cases, three of which were regarded as instances of probable adherent pericardium; three were incompletely described; accessible data for the other two cases was scanty.

This anomaly is a congenital defect, probably caused by an early break in the normal development of the embryo, which is connected with failure of closure or incomplete closure of the left pleuropericardial membrane, and occurs during the first five weeks of intra-uterine life. Various explanations of the exact mechanism of the failure are given by Keith, Perna, Risel, Plaut and McGary (quoted by Moore⁸). Other congenital anomalies have usually been associated with this condition.

In Moore's analysis, in five instances enlargement of the heart was observed. Barsoum¹ also noted a large heart (1,000 gm.). Beck² noted some cardiac enlargement; Grant⁶ observed a small heart at autopsy. Adhesions connecting the heart with the lungs were found in twelve instances. The condition was observed by Moore⁸ and Baillie (quoted by Moore) in the dog.

Grant⁶ made an analysis of the cases reported in the literature, in which records of the size of the heart were obtainable, and observed ten cases of enlargement of the heart, ten cases of hearts of normal size, fourteen cases in which the size was not stated, two in which size was uncertain, and ten in fetuses and children. Ladd⁷ ob-

served a pericardial defect at operation for diaphragmatic hernia, in an infant. In the literature he found three instances of the pericardial defect associated with diaphragmatic hernia.

In this paper I wish to present three cases of congenital deficiency of the pericardial sac; in all three the condition was an incidental finding at autopsy. Two instances occurred in adults who lived apparently normal lives and succumbed to other diseases; no other anomalies were noted. The third instance was observed in a white girl, seven weeks of age, who had a "congenital abdominal hernia," and who died of erysipelas. The hernia was due to absence of the recti muscles. The heart projected through a diaphragmatic defect and a pericardial defect into the abdominal cavity. The diagnosis was not suspected in one of the two adults; in the infant and in one adult, the diagnosis of chronic adhesive pericarditis was made. These three cases represent the group of autopsies performed at Cook County Hospital by Dr. Richard H. Jaffé and his associates during the years of 1930 to 1937.

Case 1.—A colored male, forty-five years of age, complained of edema of the ankles and weakness for eight months. He admitted having had both gonorrhea and a chancre "about twenty years ago." He gave a contradictory history.

Physical examination revealed a euphoric patient, with reeling gait. The blood pressure was 170/130. The pupils were pinpoint and irregular, and there was no reaction to light. The heart was enlarged down and out, and retraction of the costal interspaces was noted in systole. The rate was regular except for an occasional missed beat. There was a pericardial rub as well as a presystolic and systolic murmur at the apical area. The aortic and pulmonic second tones were accentuated. Another observer noted: "Apex beat diffuse, pulsation marked in the left mid- and anterior axillary line extending to the midclavicular line, and from the 5th to the 8th intercostal space. There is slight retraction of the intercostal spaces with each cardiac contraction. When the patient is lying on his back there is a fine crackling sound, systolic in time, heard close to the ear in the 5th interspace of the anterior axillary line. On turning the patient on his right side, in about the same spot a rub can be heard, the systolic phase of which is much louder than the diastolic." There was no edema of the extremities. A diagnosis was made of mitral regurgitation and stenosis, chronic adhesive pericarditis, chronic myocarditis and senility.

Laboratory examination of the urine gave negative results. The blood was normal. The blood Kahn and the spinal fluid Wassermann test reactions were negative. Blood chemistry showed urea nitrogen of 41 mg., and creatinine of 2.5 mg., with a one plus indican. Roentgen-ray examination revealed moderate cardiac enlargement, especially of the left ventricle. The electrocardiogram showed left ventricular preponderance; P 1, 2, 3 notched,

CONGENITAL DEFICIENCY OF THE PERICARDIUM—KADIN

QRS 1, 2, 3 notched, T 1, 2, negative. The condition of the patient gradually grew worse; the cerebral symptoms became more marked, and signs of right-sided paresis developed a few days before death.

Autopsy findings (Dr. Jaffé).—Anatomical Diagnosis: Eccentric hypertrophy of the heart, especially of the left ventricle and parenchymatous degeneration of the myocardium. Focal recent and ancient encephalomalacia in the cortex of both temporal lobes and in the right occipital lobe, in the left putamen and right gyrus cinguli. Severe sclerosis of the basilar cerebral artery. Congenital defect of the pericardial sac with ectopia of the heart into the left pleural cavity.

Pericardial sac: The right half is fully developed while the left half forms a septum which is 2 to 3 cm. broad. The edges of the two parts of the sac are perfectly smooth.

Heart: Displaced into the left pleural cavity. Enlarged. 15 cm. longitudinal and 11 cm. in transverse diameter. The wall of the left ventricle is 21 mm.; the wall of the right ventricle is 6 mm. The myocardium is pale gray-brown and friable. The trabeculae are flattened. There is a diffuse whitish thickening of the endocardium in the region of the apex of the left ventricle.

Aorta: Measures 90 mm. at the aortic valve ring, 62 mm. at the celiac axis and 45 mm. at the iliac bifurcation. The intima of the thoracic portion shows numerous small slightly elevated light yellow plaques. The coronary arteries show a few hyaline fatty plaques up to 10x8 mm.

Case 2.—A white female, seven weeks of age, who had been normally delivered, was referred to the Cook County Contagious Hospital for erysipelas and congenital abdominal hernia. The physical examination revealed a poorly developed chest and enlargement of the heart. A systolic murmur at the apex and marked epigastric pulsation were noted; also a large umbilical hernia, with infected edges. The entire vulva was intensely red, elevated and apparently tender, with erythema spreading to the abdomen. The patient died eleven days after admission.

Autopsy findings.—Anatomical Diagnosis: Erysipelas of vulva and dorsum of right foot. Ectopia cordis. Communication between pericardial sac and abdominal cavity. Mesentery communis of ileum, cecum and ascending colon. Defect in anterior abdominal wall in region of umbilicus with absence of the recti muscles. Fibrous cord between apex of heart and anterior abdominal wall.

External findings: In the anterior abdominal wall, in the region of the umbilicus, is a bulging defect in the skin, 5.5 cm. in diameter. The floor is formed by a slightly granular purple-red membrane.

Abdominal cavity: The recti muscles are absent and the defect in the region of the umbilicus is formed only by a thin membrane which is firmly adherent to the anterior surface of the liver. The liver is much enlarged. The greater omentum is adherent to the anterior margin of the liver and forms a pocket in which the left lobe rests. The superior portion of both left and right lobes of the liver form two tongue-like projections which protrude through a defect in the diaphragm into the chest cavity. Between these two projections the apex of the heart protrudes through a defect in both the pericardial sac and the diaphragm into the abdominal cavity. A narrow cord of firm tissue extends from the apex of the heart to the abdominal wall. The terminal ileum, cecum, ascending colon and appendix are in the upper part of the abdominal cavity attached by a very long mesentery. Pleural cavities are intact and everywhere lined with parietal pleura. *Pericardial sac:* The inferior aspect

of the pericardial sac is in open communication with the abdominal cavity.

Heart: Near the apex is a fibrous cord 3x0.5 cm. which connects the left ventricle to the anterior abdominal wall. The external configuration of the heart appears unchanged except that the right ventricle is larger than normal.

Case 3.—A white male, fifty-eight years of age, was readmitted to the hospital eight months after refusing surgical treatment for carcinoma of the stomach. He complained of severe pain in the upper part of the abdomen of two days' duration. He vomited some food, but no blood. Blood was passed per rectum. The diagnosis of ruptured carcinomatous ulcer of the stomach was made, based on the history, findings of the diffusely rigid rounded abdomen, tympanitic throughout, with peristalsis markedly diminished. On his previous admission, x-ray examination revealed a rather constant large defect of the pars pylorica and lesser curvature of the pars media, diagnostic of carcinoma. Radiograph of the chest revealed marked cardiac enlargement, with increase of the right hilum markings, and obliteration of the right costophrenic angle. Gastroscopy (Dr. R. Schindler) revealed extensive infiltrating ulcerative carcinoma (Type IV). Physical examination of the heart revealed: no murmurs, aortic configuration with marked cardiac enlargement, and on percussion the left border was observed to be in the anterior axillary line. A pulsating mass just above the umbilicus was also noted. The patient died the day after admission.

Autopsy findings (Dr. J. L. Kirschbaum): Anatomical Diagnosis: Ulcerated mucus-producing adenocarcinoma of the stomach with perforation and formation of an intramural abscess; perforation of the abscess and sealing off by the left lobe of the liver. Metastases to the perigastric, peripancreatic and periaortic lymph nodes. Marked emphysema of the left side. Acute fibrinous epicarditis. Congenital absence of the pericardial sac. Marked eccentric hypertrophy of the heart.

Pleural cavities: The left pleural cavity contains 800 c.c. of a greenish purulent material. There is no evidence of a pericardial sac; the heart occupies the lower one-half of the left pleural cavity.

Heart: 570 gms. The myocardium is very soft, very friable, and light purple-brown. The left ventricle is 17 mm. The right ventricle is 6 mm. The cardiac chambers are dilated. The left pulmonary veins are very short. The left auricle is adherent to the hilum of the lung. The valves are unchanged. The epicardium is injected, dull and covered by fine flakes of fibrin. The aorta measures 75 mm. (aortic valve); 55 mm. (celiac axis) and 40 mm. (iliac bifurcation). The pulmonary artery measures 90 mm.; the intima is smooth.

Lungs: The left lung is shrunk and non-crepitant. In the pleura, especially in the upper lobe, there are single, up to 3 mm. stony hard anthracotic nodules. The surface of both lobes is dull. The surface of the lower lobe is covered by flakes of fibrin.

Summary

Three cases of congenital defect of the pericardium are reported: (a) partial defect in the pericardium, associated with defect of the diaphragm (heart projecting into the abdominal cavity), (b) total absence of the pericardium, and (c) absence of all but a very small septum of the right portion of the pericardium.

That this condition is compatible with life is particularly emphasized in that two of the three cases were found in adults who died from other causes, none cardiac. The pericardial defect was an incidental finding at autopsy. The condition produces no apparent cardiac handicap or deficiency in function.

There are no diagnostic signs or findings. X-ray and electrocardiogram give no characteristic sign, and do not indicate the presence of the condition. In one instance, the condition was diagnosed during life, as an incidental discovery at operation for diaphragmatic hernia. In the three cases reported, left or eccentric cardiac hypertrophy was noted in the two adult cases, and in the third case (infant) right ventricular hypertrophy with cardiac enlargement.

The absence of a pericardium, or the

presence of a defect, produces pericarditis and epicarditis in the presence of an empyema of the pleural cavity in which the heart lies.

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SPECIAL RECOGNITION OF THE GENERAL PRACTITIONER

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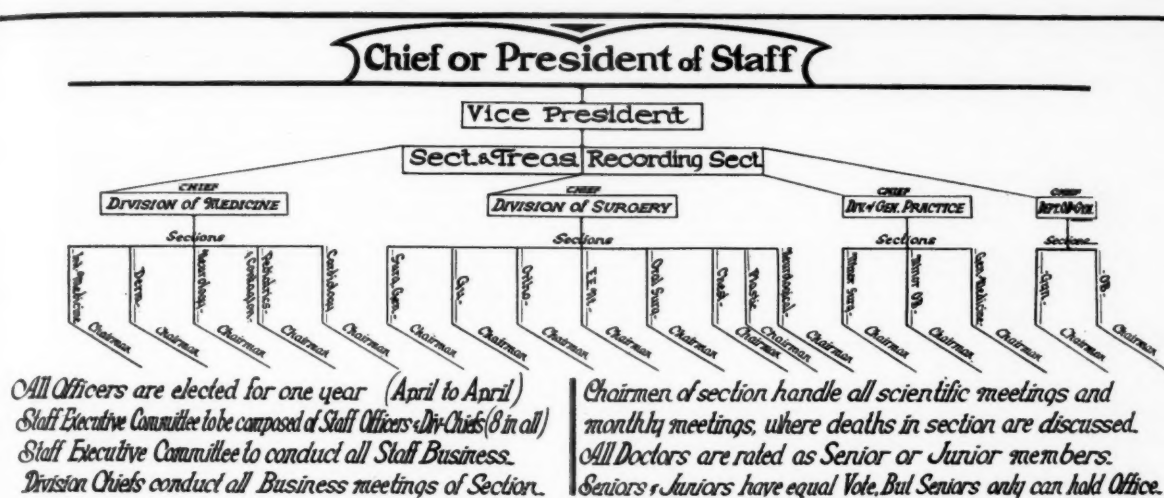
For years the general practitioner in medicine has been considered the backbone of the practice of medicine. As the most important factor in medical care, he has been recognized by the family not only as a conservator of health, but also through his guidance and consultation as advisor in other matters as well. It is the general practitioner who is called by the family regardless of the nature of the ailment. He is, in a sense, not only the "filter" committee, but also a tireless worker for the filter committee. In all cases of illness that he feels are beyond his ability to handle satisfactorily, he recognizes the situation and calls in a competent consultant to see the patient.

The general practitioner division of the Mt. Carmel Mercy Hospital, therefore, includes any doctor practicing medicine whose work does not exceed fifty per cent of his practice in any one specialty. Hospital staffs should be so organized as to include this general practitioners group in their set-up. To quote from a letter sent to the various staff physicians of Mt. Carmel Mercy Hospital:

"At a recent meeting of the Executive Committee of the Staff, it was determined that for the purpose of establishing a proper division of the staff, a specialist shall be defined as one who devotes more than seventy-five per cent of his practice to his specialty. In view of the above definition, it is believed that many men now registered in the Surgical, Obstetrical and Internal Medicine divisions should properly be enrolled in the General Practice Group.

"Men registered in the General Practice division will be given privileges in regard to major and minor surgery, obstetrics, as the standards set up for this work are met. Those of you who may be registered as Junior for the present may become Seniors when you have demonstrated to the satisfaction of the Credentials Committee that you are competent to do major work. It is the opinion of the Committee, however, that men whose work does not exceed 50 per cent in surgery, obstetrics and medicine should be registered in the General Practice Division."

When the new Mt. Carmel Mercy Hospital was opened on January 15, 1939, as an entirely modern, seven story, three hundred and fifty bed hospital, it was recognized at once that the general practitioner should have a division of his own. In the formation of the staff, consequently, four departments were organized, namely, the Department of General Surgery, Department of General Medicine, Department of Gynecology and Obstetrics and the Department of General Practice. All the departments have departmental heads elected by their departmental group; these represent them on the executive committee. The schematic drawing presents graphically the set-up as organized in this hospital. According to our arrangement, the physicians and surgeons are classified as to their training, ability and experience in the department in which they seek privileges. They may be made Seniors in their department when they fulfill the requirements of Seniors, which requirements are those demanded for fellowship in the American College of Surgeons and the American



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College of Physicians. A Junior in his department may become a Senior at any time that his qualifications are presented to and approved by the credential committee. There is no limit to the number of Seniors in a department or section.

A Senior in the Department of General Practice is a doctor who has been in practice at least ten years and has shown by his training, work and conduct that he is qualified to become a Senior. Senior men in the General Practice Department are accorded the privilege of doing limited major surgery and limited major obstetrics. All seniors must have been doing limited major surgery in recognized hospitals for a number of years. The man who has been in practice for at least ten years and has been given the honor of being a Senior in his department is recognized as having good clinical judgment and technical skill, and has shown that he will not attempt any procedure with which he is not thoroughly familiar. He must be progressive to the extent that he attends all postgraduate clinics given by the Michigan State Medical Society. Also all scientific meetings possible.

A Junior in the Department of General Practice is a man who has been in practice less than ten years, one whose training and work do not meet the requirements set down by his department, but has attended postgraduate clinics and scientific meetings, as well as his association with Senior men in his work makes him a likely candidate. It is felt that all ethical doctors should be afforded a position on the hospital staff. A patient is far safer in the hands of a less experienced doctor in a class A hospital than in the hands of such a doctor in the home or in a non-recognized hospital.

An advantage of such recognition is that it enhances the dignity of general practice, thereby encouraging men to remain at it a reasonable time before seeking a specialty. It is almost universally conceded that the specialist who has a broad background of general medical and surgical practice will render more efficient service than he who immediately on leaving college limits his practice to a particular region of the human body.

PRICELESS PROGRESS BUT DECEPTIVE*

NORMAN F. MILLER, M.D.

ANN ARBOR, MICHIGAN

Anyone familiar with the hazards of childbearing in the United States of America must derive considerable satisfaction from the reported decrease in maternal mortality. Michigan physicians may take pride in the fact that during 1937 the maternal death rate for this state reached an all-time low. The rate was only slightly higher in 1938. One reason for this decline has been the steady decrease in the number of deaths from toxemia. Indeed, obstetricians and physicians practicing ob-

stetrics may be especially interested in what has occurred in Michigan with reference to the toxemias of pregnancy. This is clearly shown in the graphic chart.

The recorded mortality from this cause reached an all-time low in 1937 and it would appear that in this group of diseases real progress is being achieved. While the 50 maternal deaths from toxemia in 1937 is still well above the irreducible minimum it nevertheless represents a tremendous improvement. The factors responsible for this accomplishment are both important and interesting but

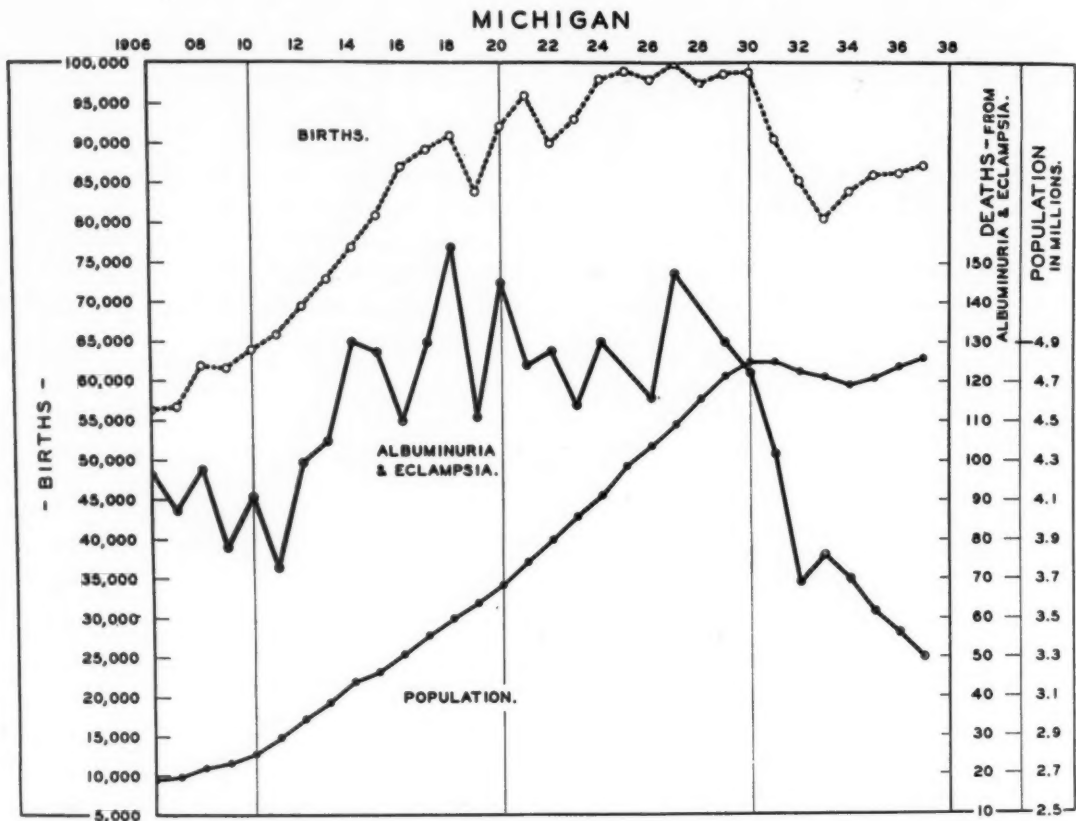
*From the Committee on Maternal Health, Michigan State Medical Society.

PRICELESS PROGRESS—MILLER

cannot be discussed at this time. While in Michigan the number of deaths from toxemia, in 1938, equalled that recorded for 1935, this may represent only a temporary rise in what, it is hoped, will continue to be a progressive decline. *But*, there is another angle to the problem which must not be overlooked.

neither uniform nor clear. Yet, recognition of certain basic facts should prove helpful.

The fact that we still do not know the cause of toxemia does not appear to be an insurmountable obstacle to its control. Progress already made amply proves this point. Prevention, always important, a



The recorded deaths attributed to toxemia of pregnancy do not tell the whole story. In this respect, the mortality is deceptive for it includes only the immediate or acute deaths, whereas many women die months or years later as the result of a severe and/or excessively prolonged toxemia during pregnancy. Just how many late deaths occur from this cause is unknown, but it is safe to state the recorded figures by no means indicate the total havoc wrought by this complication. Thus, it is known that more women than men between the ages of 15 and 44 die from chronic nephritis. Furthermore, increasing evidence reveals that approximately 40 per cent of toxemic sufferers will have evidence of serious renal and/or vascular disease within a few years following the primary toxemia. To be sure, much additional study is necessary before this less tangible aspect of the problem can be properly evaluated. In the meantime, however, it may be well to remember that good therapy aims at more than one objective. Reduction in immediate mortality for both mother and child is tremendously important but it is not enough. Morbidity and late mortality from this cause must also be reduced. Ways and means for accomplishing this double objective are

specific reality for parous women, that is those women reporting toxemia with a previous pregnancy, still is not adequately utilized. Active therapy continues to be the application of one or more of the many systems or methods of empirical treatment, and, when these fail, the interruption of pregnancy. There is need to recognize these systems for what they really are; namely, means of symptom control and nothing more. Since there are many to choose from it behooves us to select that method or combination of methods which best controls the symptoms, and also minimizes the hazard of permanent vascular and/or renal injury. Finally, since we do not know the cause of toxemia, and since there exists no cure with the possible exception of termination of pregnancy, let us definitely recognize that failure to control symptoms becomes a clear cut indication for interruption of pregnancy by intelligent and conservative means. This is important, because prolonged exposure to a poorly controlled toxemia may be every bit as damaging as a brief but extremely severe attack. If treatment be intelligent and adequate, response to such treatment, rather than the stage of gestation, should be our criteria for interruption.

STAFF CONFERENCE, DEPARTMENT OF INTERNAL MEDICINE UNIVERSITY HOSPITAL, ANN ARBOR

Case 1.—T. S., a white Hungarian housewife, aged forty-eight, was re-admitted to the University Hospital March 6, 1939, because of an acute upper respiratory infection. She was first admitted to the Gynecology Service on February 5, 1936, because of menorrhagia and metrorrhagia. At this time she had no other symptoms except the above and those referable to a ventral incisional hernia which had been increasing in size for a year. Glycosuria was found on routine examination. A glucose tolerance test was performed on February 10, 1936 (using 1.75 gms. of glucose per kilogram of body weight) with the following results:

Time	Fasting	1st hr.	2nd hr.	3rd hr.
Blood	128 mg. %	314 mg. %	322 mg. %	202 mg. %
Urine	0	+++	++++	+++

She was given a castration dose of x-ray, which stopped her uterine bleeding.

Because of her obesity (193 pounds) she was placed on a reduction diet of 1,000 calories with 50 A.G. (available glucose). While on this diet her urine remained free from sugar. Her diet was altered from time to time but her impaired glucose tolerance permitted glycosuria when the available glucose in her diet was raised above 110 gms. On April 20, 1936, she weighed 162 pounds. She was readmitted to the hospital May 5, 1936, for a ventral herniorrhaphy. Bronchopneumonia developed following the operation and small doses of regular insulin were given to keep her urine free from sugar; but this was ultimately eliminated. She was again instructed to follow the reduction diet of 1,000 calories with 65 gms. of available glucose (her weight at this time being 142 pounds). The available glucose content was increased slowly until once again she could eat 110 A.G. without having glycosuria.

only occasionally. While on this general reduction diet, her urine was free from sugar. Another glucose tolerance test was obtained July 28, 1937 (see table).

On March 2, 1939, she developed a head cold, generalized malaise, and a chill, followed by a cough and some blood streaking of her sputum. She was readmitted to the Medical Service March 6, 1939. The remaining systemic history was not contributory. There was no family history of diabetes mellitus.

Physical examination: T. 102.4° (F); P. 132; R. 28; B.P. 130/80; weight 133 pounds. She was acutely ill and there was slight cyanosis of her nailbeds and lips. The conjunctivæ were injected and photophobia was prominent. The nasopharynx was acutely injected but no exudate was present. The lungs were free from abnormalities except at the base of the right lung posteriorly, where there was dullness, a decrease in the whispered and spoken voice, and crepitant râles. The heart was not abnormal. The abdominal examination revealed an incisional ventral hernia but no visceral enlargement.

Laboratory data: Urine: No sugar or ketone bodies were demonstrable at any time. The blood studies showed red blood cells 4,000,000 per cu. mm.; white blood cells 4,900 per cu. mm.; hemoglobin 85 per cent (Sahli); the differential count was not abnormal. The sputum examination by culture showed a variety of organisms, including Type III pneumococci.

Case 2.—J. W., a white farmer, aged forty-six, was first seen in the Medical Out-patient Department of the University Hospital on December 6, 1938, complaining of weakness. He had been well until about one year prior to his first visit here, at

GLUCOSE TOLERANCE TESTS

Date	2/10/36	Urine	8/4/36	Urine	10-27 1936	Urine	11-3 1936	Urine	1-19 1937	Urine	5-5 1937	Urine	7-28 1937	Urine
Weight	193		133½		132		134		152		144		142	
Fasting	128	+	85	0	104	0	91	0	119	0	103	0	88	0
1 hr.	314	+++	216	++	176	+	139	0	230	++++	148	++	135	0
2 hr.	322	++++	198	+++	107	0	72	0	185	++++	128	++	107	0
3 hr.	202	+++	118	+	78	0	61	0	102	++	101	0	66	0
4 hr.			68	0	58	0	59	0	61	0	63	0	56	0

In August, 1936, after a glucose tolerance test (see table), her diet was again changed so that she was eating a diet with a caloric value of 1,200 calories with 140 A.G. without having glycosuria. At this time she weighed 133½ pounds. In October, 1936, she was given a general diet and after four days another glucose tolerance test was obtained (see table), and another in November, after 12 days on a general diet (see table). She returned in January, 1937, having gained weight (152 pounds), at which time her glucose tolerance test was again abnormal (see table). She continued to eat a general diet and when she returned in May, 1937, her weight had fallen to 144 pounds. The glucose tolerance test showed an increase in the tolerance (see table). At this time she was again placed on an anti-obesity diet in an attempt to reduce her weight to 134 pounds, but she restricted her food intake

which time he developed ease of fatigue, weakness, and occasionally drowsiness. There was a noticeable polyuria and polydipsia as well as an increase in his appetite. Early in November, 1938, he had a moderately severe illness during which he had watery diarrheal stools but these did not contain gross blood or pus. This acute episode lasted ten days, during which illness it was found that his urine contained sugar. Concomitant with these symptoms there had been a weight loss of about seventeen pounds. When he was first seen here he had recovered from this acute gastro-intestinal upset.

The systemic history was not significantly abnormal. There was no family history of diabetes mellitus. He had been obese for approximately sixteen years, weighing 135 pounds at twenty years; 145 pounds at twenty-five years; 160 pounds at thirty-five years; 200 pounds at forty years; 200

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pounds in November 1938, and 183 pounds in December, 1938.

The physical findings were not abnormal except for a rather marked degree of obesity. His blood pressure was 140/70 mm. of mercury. The urine examination at this time showed a ++++ sugar reaction, but no diacetic or acetone bodies.

He was given a "glucose tolerance preparation diet" for three days and on the fourth day a glucose tolerance test was performed, giving 1.75 gms. of glucose per kilogram of body weight. The results of this were as follows:

	Fasting	1st hr.	2nd hr.	3rd hr.	4th hr.
Blood..	242 mg.%	370 mg.%	482 mg.%	410 mg.%	356 mg.%
Urine..	+++++	+++++	+++++	+++++	+++++

He was then given a diet containing 1,200 calories with 125 gms. of carbohydrate and 70 gms. of protein, with the advice to return for reexamination when his weight was normal (calculated to be 163 pounds). He was discharged December 15, 1938.

Course at home: He adhered to his diet. His urine was examined on only two occasions and each time sugar was present. He felt quite well until two weeks before readmission, at which time he developed ease of fatigue and drowsiness, aching in his lower extremities, polyuria and polydipsia. Thirty-six hours before readmission on February 28, 1939, he developed a severe head cold.

The physical findings were: T. 98° (F); P. 88; R. 20; B.P. 105/60. He now weighed 145 lbs. but was moderately dehydrated. His skin was dry and showed a yellow discoloration which was particularly noticeable on the palms of the hands and soles of the feet. There was a moderate hyperkeratosis pilaris. The sensorium was cloudy. There was an acetone odor to the breath. Evidence of a mild rhinopharyngitis was present but the examination otherwise was not significant.

Laboratory data: Blood: R.B.C. 6,000,000 per cu. mm.; W.B.C. 8,100 per cu. mm.; Hg. 102% (Sahli); the differential count was not abnormal. The urine examination showed albumin 4+; sugar 4+; no r.b.c., 1-2 w.b.c. per high power field, and 7-10 coarse granular casts per low power field. The blood sugar was 336 mg. per cent and the plasma CO combining power was 25 volumes per cent. The plasma cholesterol was 700 mg. per cent (200-250 mg. per cent is normal by this method). The serum carotene was 44 dichromate units (normal, 4-5 dichromate units).

Course in the hospital: The treatment consisted of repeated doses of regular insulin, parenteral (intravenous saline) fluids, and sodium bicarbonate by mouth. He recovered from the acidosis and was given a diet containing 100 gms. protein, 250 gms. carbohydrate, and 3,000 calories, on which diet he was well controlled with the use of regular insulin (U40), 40 units at 7:00 A. M., 10 units at 2:00 P. M., and 12 units at 10:00 P. M. At the time of discharge, he weighed 165 lbs.

Discussion

DR. LOUIS H. NEWBURGH: The chart of the first case shows the close relationship, in such a patient, between body weight and ability to dispose of ingested glucose. We have come to recognize this type of patient as one whose disturbance in the metabolism of carbohydrate is based upon long standing obesity. That this disturbance is reversible by reduction of weight is again demonstrated by this patient. It should be noted that all glucose tolerance tests, both before and after weight reduction, are done after the patient has been fed a standard

high carbohydrate preparatory diet (300 gms. carbohydrate, 80 gms. protein and maintenance calories) for at least three days prior to the test. We thus eliminate any effect which the previous dietary might have upon the results.

From a clinical point of view it is important to note several things in the history of this patient. She came to the hospital for a surgical condition which was relieved. Glycosuria was an incidental finding and although all of the diagnostic criteria for true diabetes mellitus were satisfied, the patient had never had symptoms suggesting this disease. She had been markedly obese for at least twelve years before coming to the hospital. There had been no spontaneous weight loss.

The marked loss of tolerance during a sharp infection and the difficulty in controlling true diabetes under such conditions is well known. In contrast, this case afforded us an unusual opportunity to confirm our general impression that the patient was not a true diabetic. On this last admission to the hospital, she had a severe sore throat, a temperature of 104° (F), and râles at one lung base. Despite her obvious toxicity there was at no time any glycosuria or ketonuria.

The other case, Mr. W., is shown to emphasize the history and course of a true diabetic. He also had been obese for many years. His weight history shows a progressive increase in weight until he reached 200 pounds. The clinical history indicates the difference. This patient had been losing weight spontaneously before he came here in spite of an excessive appetite. His weight on admission was 183 pounds. He had been having polyuria, polyphagia and polydipsia associated with listlessness, drowsiness and confusion. All of these are symptoms of uncontrolled true diabetes mellitus, even though he was still overweight when we first saw him. The fact that his glucose tolerance test was abnormal would not, of course, differentiate him from an obese glycosuric. Assuming that he had glycosuria due to obesity, he was sent home on a reduction diet. He came back again in severe acidosis which required vigorous treatment. The blood cholesterol was strikingly elevated, as is so often the case.

The whole point here, as I see it, is that we must not be over-enthusiastic about the relationship of hyperglycemia and obesity in the sense that *all* obese persons who have glycosuria are suffering merely from a complication of obesity and not from diabetes. Patients who have glycosuria as a complication of obesity often seek medical aid for reasons other than the glycosuria. They are obese and have not lost weight unless they have been given a reduction diet. It is characteristic of them to maintain their adiposity. Seven or eight of every ten obese, middle-aged persons with glycosuria are not diabetic in the true sense. They can be returned to normal merely by reduction of their weight.

The others, also obese, have true diabetes. These give a history of obesity. Then, characteristically

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and for no apparent reason, they begin to lose weight, become weak and debilitated. An individual may, therefore, be obese at the time that the physician first sees him and still have diabetes mellitus.

DR. JEROME CONN: I have very little to add to Dr. Newburgh's remarks except to clarify a point about our work which I find has been misinterpreted in the literature. We have striven to emphasize that since the obese, middle-aged glycosuric group of patients show no impairment in their ability to oxidize glucose, they are, by definition, not true diabetics; that their deficiency, which is fundamentally different from that suffered in true diabetes mellitus, can be corrected by weight reduction. This simple concept has been missed. It has been interpreted as a claim to be able to cure diabetes mellitus by reduction of weight. Since we feel that this group does not have true diabetes mellitus, such an interpretation is incorrect. The obese, glycosuric patient conforms to all the accepted standard diagnostic criteria for diabetes mellitus with the important difference that he maintains a normal capacity to oxidize glucose. When his weight is reduced to normal he disposes of normal amounts

of carbohydrate normally and no test known to us will bring out any deficiency in the metabolism of carbohydrate.

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WIDESPREAD USE OF TUBERCULIN TEST URGED TO DISCOVER INFECTION

Emphasizing the importance of early diagnosis in a tuberculosis control program, E. A. Thacker, M.D., Urbana, Illinois, in *Hygeia, The Health Magazine*, for April, urges the widespread use of the tuberculin test to discover infection.

"Early tuberculosis ordinarily manifests itself in an insidious, gradual onset, sapping the vitality and strength of the individual, yet producing only vague, indefinite symptoms," the author says. "A hacking cough often attributed to smoking or fatigue attributed to overwork may be all that is noticed."

Many persons, therefore, fail to go to a physician when such symptoms occur. A routine program using the tuberculin test, such as many communities and schools have inaugurated, discovers such early cases.

While a positive reaction to the tuberculin test does not mean that the person examined has active tuberculosis, it indicates that at some time or other he has been infected with it. "Positive reactors are far more likely to develop the disease in later life than are the negative reactors," Dr. Thacker points out. Therefore, an x-ray examination should be performed on all positive reactors to determine whether the disease is in the active stage.

Discussing the course of the disease, the author says, "The initial or childhood type of infection produces an inflammatory or pneumonia-like lesion in the lungs and after weeks or months usually completely heals, leaving a small scar or a calcified nodular tubercle. Although children may die from this first infection, the vast majority overcome it, and many pass through this initial infection without knowing it."

"The adult type of tuberculosis occurs in one of two ways. The small healed lesions from the initial infection may break down, allowing some of the organisms that have remained alive within the tubercle to spread through the allergic tissues. Or else the person comes in contact with an active case of tuberculosis; the bacilli are taken into the lungs and the destructive type of tuberculosis begins."

"The classic symptoms of the reinfective or adult type of pulmonary tuberculosis include loss of appetite, loss of weight, fatigue, unexplained pains in the chest, afternoon fever, pleurisy, cough and sometimes blood in the sputum."

THE JOURNAL

OF THE

Michigan State Medical Society

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JUNE, 1939

*"Every man owes some of his time to the up-
 building of the profession to which he belongs."*

—THEODORE ROOSEVELT.

EDITORIAL

THE FREE CHOICE OF PHYSICIAN

WE HAVE heard a great deal of the matter of securing for the patient the right of free choice of physician. Those not so intimately concerned with medicine as are doctors themselves, are apt to wonder, why all this solicitude on the part of the medical profession. A phase of the subject that has hitherto been wholly unemphasized, or only slightly so, is the fact that competition is necessary if we are to be at our best and to give of our best. Competition in industry has produced the best possible automobile and the best iceless refrigerator. Monopoly tends to stagnate. If one has entire control of any entity, why improve it?

Competition in medicine, which is expressed in the phrase, "free choice of physician," stimulates the physician not only to promptness in meeting the demands of his profession, but in self-improvement as well. In other words, "free choice of physician" disposes him to buy books, to subscribe to professional magazines, to pursue postgraduate study and to attend to all amenities which make for a successful physician. Without this privilege on the part of the patient, it is difficult to foretell with any accuracy what the status of medicine might be in the matter of a very few years.

Let us have free choice of physician then, because this prerogative on the part of the patient makes the best possible physician and surgeon.

THE STATE MEDICAL JOURNAL

"My dear Doctor:

"Though we had hoped to find a place for your paper in the _____ Journal, and have held it until now, we find that the space is so limited that we are compelled to return a number of papers that we would like to publish.

"Therefore, we are sending you the paper, which you may care to place elsewhere."

THIS is a copy of a bona fide letter from one of the national journals to a contributor whose voluntary contribution had been accepted and had been kept on file for a considerable length of time. We publish it as typical of the experiences which not only national medical and scientific publications are having, but one which holds for state medical journals as well.

The state medical journal has come to be looked upon as an institution. If institutions render service to a large clientele, their right to existence is beyond question. If they do not, on the principle of survival value, they will go to the wall. THE JOURNAL of the Michigan State Medical Society is published by the council of the society originally for the purpose of putting in permanent form for the membership, papers that are read at the annual meeting of the society. This JOURNAL, however, has widened its scope and has accomplished more than this. There has been an effort towards publication of the best of the papers presented at other than the annual meeting of the state society, those read before the county medical societies, and voluntary contributions of merit, likewise, have been accepted.

The fact that medicine has advanced in the past two decades is unquestioned. Coupled with professional scholarship acquired at college, we have postgraduate courses, now universally accepted. One result of it all is that the workers in the various departments of medicine and surgery desire to record results of their clinical research, for this term would describe much of it. The only means of placing it on record and of passing it on for the benefit of others is the printed page; the page of the journal reaches the readers much more promptly than the page of the book.

There never was a greater demand for space in this JOURNAL than at the present time. It has kept pace with the spread of the urge for self-improvement and postgraduate medicine and surgery.

SUBSTANDARD CULTS

WITH the biennial sessions of state legislatures, the recrudescence of cult legislation comes to the fore. Michigan is not alone in this respect. The New York and the Massachusetts legislatures are confronted with cults seeking legalized privileges or extension of the privileges they already have.

The osteopaths of New York are seeking legislation which would enable them to perform minor surgery and to employ anesthetics, antiseptics, narcotics and vaccines. It is somewhat confusing to know what is included under the term, osteopathy. We have never seen a textbook on osteopathic anatomy, physiology or practice. Webster's Dictionary (latest edition) defines osteopathy as a "system of therapeutics based on the theory that diseases are due chiefly to mechanical derangement, especially displacement of bones, as the vertebræ, with resultant pressure on the nerves and blood vessels, with corresponding interference with innervation and circulation." The definition goes on to say that treatment is directed toward mechanical corrections, especially by manipulation of the parts. The *New York State Medical Journal* of April 1, 1939, comments as follows:

"To permit osteopaths to perform surgical procedures of any kind would break down an important distinction between osteopaths and physicians—a distinction which is inherent in osteopathic theory and in the limited educational preparation osteopathic students receive.

"Include surgery and the administration of drugs

in osteopathy and for all practical purposes you have the practice of medicine. If osteopaths desire to practice medicine, they should complete the pre-medical course required of medical students, take the full medical course in a medical college, and intern in an accredited institution as physicians do.

"The desire of osteopaths to employ drugs and perform surgery is an admission of the deficiencies of osteopathy proper. Even the best educated osteopaths are trained in accordance with this limited, sectarian theory. They are not qualified to embark on the broader duties of medical practice."

The *New England Journal of Medicine* for April 20, 1939, quotes from a report of a special commission of Osteopathy, Chiropractic, Food, Drugs and Poisons, as follows:

"After several hearings, the commission is not convinced that the Commonwealth should establish a separate board of examination and registration of osteopaths. It has been asserted, and admitted, that osteopaths engage in the practice of medicine; therefore, it appears to the commission that they should be required to pass the examination of the Board of Registration in Medicine."

The premises are sound; in logic, there is no escape from the conclusion, comments the *New England Journal of Medicine*. We could go on at length, but to medical readers, it is scarcely necessary to point out the fallacy of extending privileges to substandard cults while exacting higher and higher standards in regular medicine.

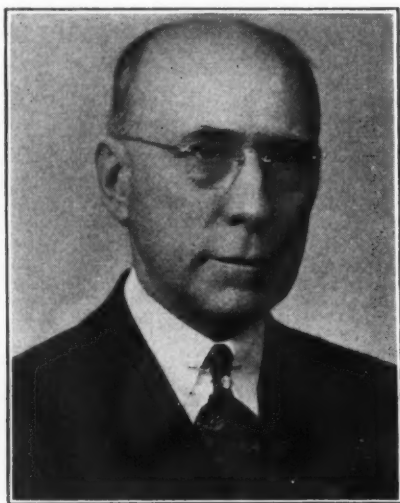
From the legislator's viewpoint all, including medicine, are viewed as self-seeking, pressure groups who must be dealt with without discrimination. We have already pointed out that regular medicine is the only system that is recognized by state supported institutions of higher learning as well as highly endowed universities throughout the land. The only logical viewpoint for a legislator, or a doctor, or anyone else, is that those institutions which render the greatest service to the greatest number are entitled to legal recognition. Our position as an alleged "pressure group" is unfortunate. As the *New England Journal of Medicine* so aptly expresses it, "Physicians must ever be alert to detect efforts to lower the standards of the practice of medicine, and must constantly exert themselves to prevent such degradation." The physician more than anyone else knows and realizes the danger of substandard cults, when at the same time nation-wide efforts are being exerted for the amelioration of public and private health. It is not a matter of being fair to any one or more pressure groups; it is a matter of recognizing the highest

standards and discouraging lower, of recognizing the good of the people as a whole.

The Council of the Michigan State Medical Society is to be complimented upon the acquisition of Dr. Miller.

A. H. MILLER, M.D.

DR. A. H. MILLER of Gladstone, Michigan, has been appointed councillor for the twelfth district, succeeding the late Dr. C. D. Hart, who died shortly after tender-



DR. A. H. MILLER

ing his resignation as councillor of the twelfth district. Dr. Miller, in response to a request for data for a biographical sketch, wrote facetiously of his "short but simple annals in life's sequestered scene." With this brief introduction, we expect great things of Dr. Miller. His so-called "sequestered life" has afforded him the opportunity to develop intellectually and professionally way beyond the majority of us. Dr. Miller was born in Thessalon, Ontario, October 8, 1881. He received his preliminary schooling at Sault Ste. Marie, Ontario, and was later licensed by the state examination as a registered pharmacist in 1900. He entered the medical school of the University of Michigan the same year and graduated with the class of 1904. The doctor says he "prowled around for three years" and located in Gladstone in July, 1907. We are impressed with the deliberation exercised by the doctor before finally settling down to business. He has been in general practice, including industrial surgery, at Gladstone since first locating there. He has been twice president of the Delta County Medical Society and he is at the present time, president of the Upper Peninsula Medical Society.

MISUNDERSTOOD

THE *Detroit News* of May 3 comments editorially on what it terms a wrong use of the law. The *News* goes on to say, "The public's attention should be called to a move on the part of a number of businesses and professions to limit competition by means of laws restricting or prohibiting advertising." The *News* mentions that there have been half a dozen such proposed laws introduced into the legislature at Lansing.

We are not concerned with business, but are very much concerned when it comes to professional advertising. The importance of advertising should not be overlooked. It is the very life blood, not only of all lay periodicals, but of medical journals as well. The objection to professional advertising consists in the fact that the only thing the professional man has to offer for sale is his skill or ability and his experience. He cannot offer things that are manufactured by somebody else. When one attempts to advertise, there is a disposition to use descriptive adjectives and when it comes to describing and extolling, there is always the danger of the emotional element which jeopardizes truth. This is true in medicine and dentistry. Therefore, the medical profession have disparaged advertising. The reason, however, is not, as intimated by the *News*, "to cripple competitors and competition." Surely a profession which extends its services to the needy without money and without price cannot be justly accused of such base purpose.

The *News* specifies the bill to oppose dental advertising. It says, "The bill of the kind that has advanced farthest happens to be one aimed at the advertising dentist." It would seem on the face of it that the dentist is in the same category as the merchant or commercialist; in other words, that he has something to sell, namely, dentures. This is only partly true, however. To be a successful dentist demands as much professional skill as a physician possesses. His calling involves a knowledge of anatomy and pathology quite equal to that of the doctor, and the same may be said of his technical skill. There exist then the same reasons against self-exploitation in dentistry as

prevail in medicine, under the Hippocratic tradition.

These restrictions to publicity obviously do not apply to the distribution and sale of material things. True

He who has something to sell,
And goes and whispers it down a well,
Is not so likely to collar the dollars,
As he who climbs a tree and hollers.

When it comes to advertising merchandise of any sort, we agree with the *News*. There should be no legal restrictions of any kind except the compulsion to tell the truth and to make no unjust claims.

The stand taken by both medicine and dentistry should appeal to all who give it the least serious thought. Should competition and personal advertising or advertising one's alleged ability get out of bounds, it is impossible to conceive to what bizarre lengths it would be carried.

Insufficient Medical Care

From whence comes now this hue and cry
Of folk who say there are those who die
Because of insufficient medic care
And want of doctors, here and there?

Where is that poor benighted man,
Whose needs must have another plan?
Where is the indigent, sans pay,
From which the doctor turned away?

Where are these folk?—We ask no more—
For help—We've had sufficient store
And know we've ever faithful been
And cared for poor from morn till e'en.

We have waited long, they've answered not,
Nor have they shown we've come to naught,
And now we feel a wee bit hurt,
So, may I be a wee bit pert?

Quit now insulting physicians old,
Who've always gone where we've been told.
Quit now insulting clinics free,
That have been abused so terribly.

Quit now insulting Institutes
That have dug among disease's roots.
Quit now insulting empty beds
That await in Hostels, blacks or reds.

Quit now insulting the heritage
That men so loved and built for age.
Quit now insulting the blessed home
That proudly refused being "on the Town."

Quit now insulting the spirit free
America's spirit, fore'er to be.

WEELUM.

GOOD PAPERS GONE WRONG

MILES J. BREUER, M.O.
Lincoln, Nebraska

EDITORIAL NOTE: The following paper which appeared in the May Number of the *Nebraska State Medical Journal* contained so many meritorious suggestions on the subject of the presentation of medical papers that we have written Dr. Breuer and obtained his consent for its publication in THE JOURNAL of the Michigan State Medical Society.

Many a medical article which would otherwise be valuable, completely fails to reach its intended audience, because of deficiencies in technic of public presentation. We have seen these faults, both in the men who read papers or present addresses, and in those who discuss them or make speeches apropos of business matters on the floor. We have seen them not only in the man who is young or far from the centers of opportunity, but among some of the most prominent medical speakers. I once drove a thousand miles to hear a famous speaker and when the time came he spoke so incoherently and faintly that I got nothing except what later came out in the medical journal.

Speakers mumbling down into their vests with their necks bent forward, or standing in a sloppy attitude, will spoil the finest medical paper that was ever written. Talking too long or not having the talk properly organized; talking too technically for the particular audience, will result in the failure of the audience to catch the significance of a very fine piece of work or statistical observation. Trying to compel an audience to keep statistics in mind as the speaker reads them off of paper, or wandering off the subject is deadening; the reason people do not walk out is because they are too paralyzed to do so. Walking nervously around, indulging in some mannerism like scratching the face or tapping the foot; not looking the audience exactly in the eye, will turn three-fourths of a medical meeting from a pleasure into a chore for the listeners.

It is quite as necessary for the medical man to learn the art of public address as it is for an attorney or legislator. A medical man has quite as much public speaking to do as any one in the community. If he does it well he fulfills his purpose; if he does it poorly he does worse than nothing; he creates a bad impression of himself. In fact, it would be quite possible to set up statements quite the converse of those in the preceding paragraph, all to the effect that a well presented paper gives the audience a great deal of pleasure and profit even though there is nothing startling in its actual intrinsic contents. How many times have we heard and enjoyed a paper thoroughly because of the personality of the speaker, and been disappointed upon reading it in print to find that there was not much of anything interesting in it.

The following suggestions are offered for making the necessary good impression in delivering medical material orally to an audience. They have

been gleaned from actual experience and from contact with qualified teachers in the subject.

For experienced speakers and quick thinkers, it is better not to read the paper off the typewritten sheet but to talk naturally from notes. The notes are strictly necessary in order to keep the talk within the limits of time as well as of its own organization. Never read large quantities of statistics. If these are necessary have a chart or lantern slide. Even then they frequently fail and should be kept as far as possible out of a verbal presentation and limited to printed material, since they require solitary study.

Stand straight, stand still, stand on both feet. Do not move unless there is an actual purpose in the movement. Please distinguish the preceding from stiffness. The attitude suggested is that of maximum stability; in that attitude it is easiest to stand longest without making the audience nervous.

Use a low-pitched diaphragm voice which will carry well. Talk with the mouth wide open and use the muscles of the face. Words through closed lips sound as though Charlie McCarthy were still locked in his trunk. Words spoken with the face held as though it were a mask of cement will not carry. Adapt the volume of the sound to the size and distance of the audience and the presence or absence of electrical aids to the voice. You can tell very easily by watching the audience whether or not they hear you.

Look the audience in the eye. Look one person in the eye and then another. Make everybody in the entire audience feel that you are talking particularly and individually to him alone. Never let your eyes wander away from the audience.

You ought to be tired after making a speech. That means put energy into it. An impassive lackadaisical, monotonous droning along for ten, twenty, or thirty minutes will petrify an audience even more effectively than poison gas. It is hard work getting thoughts across to the audience. Unless you actually put this work into it you have not gotten your ideas across.

Watch the audience all of the time. Only a little experience will enable you to tell whether or not your points are getting home, and which way to vary what you are trying to do. A little more experience will enable you to play with your audience and work on their emotions much as you would play on the piano or organ. This is of course more extensively true of emotional types of speaking, but it does not necessarily exclude medical speaking.

It would do no harm if some definite attention was paid to this problem in our organized medical bodies.

WHAT IS OSTEOPATHY?

"Is it medicine or is it not? Do schools of osteopathy teach medicine or do they not?" asks an editorial in *The Journal of the American Medical Association* for April 29.

"Last year 144 applicants whose training had been received in osteopathic schools were licensed by the boards of medical examiners in ten states to practice medicine, surgery or both; 101 were licensed after examination and forty-three without examination.

"In a number of states bills have been introduced which, if passed, would give to graduates of osteopathic schools the same privileges and responsibilities that are given to graduates of approved medical schools. Is such legislation compatible with public safety or in the interest of public welfare? Proponents of these measures claim that medicine is taught as completely and as thoroughly in schools of osteopathy as in schools of medicine.

"Osteopathic schools have consistently refused to permit an inspection by the Council on Medical Education and Hospitals of the American Medical Association. Recently, however, a committee of the Kansas legislature visited one of these schools and found conditions which a recognized medical school would not tolerate. In the medical sciences, anatomy, biochemistry, physiology, bacteriology and pathology the faculty was utterly inadequate both in numbers and in scientific training. For teaching the various clinical branches of medicine the number of hospital patients available was about one twenty-fifth of the number to which students at the University of Kansas have access. This school of osteopathy, at least, does not even remotely approach the generally accepted standards of education for the practice of medicine."

IF YOU GO TO JAPAN

For the benefit of English speaking motorists the following directions are posted in conspicuous places by the Japanese roadside:

1. At the first rise of police hand, stop rapidly.
2. Do not pass him by or otherwise disrespect him.
3. When a passenger of the foot hove in sight, tottle the horn. Trumpet at him. Melodiously at first, but if he still obstacles your passage, tottle him with vigour, and express by mouth the warning—Hi! Hi!
4. Beware the wandering horse that he shall not take fright. Do not explode the exhaust box at him. Go soothingly by.
5. Give big space to the festive dog.
6. Go soothingly in the grease mud, as there lurks the skid demon.
7. Avoid entanglement of dog with your wheel spokes.
8. Press the brakes of the foot as you roll round the corner to save collapse and tie-up.

President's Page

IT CAN BE DONE

THE enactment into statute of the Enabling Bill marks a milestone in social-medical history not only in Michigan but in the United States. The Michigan Legislature has done its part. The Governor and the members of the Legislature should receive your personal endorsement of their action.

The responsibility for successful results now depends almost entirely upon organized medicine.

The majority of physicians put the social and medical welfare of the country ahead of all personal interest. There are enough patriotic men of medicine in the organization who are not afraid to pioneer. The Enabling Act makes it legally possible for such an action to be taken.

There still exists in the lay population a large number who do not want to be regimented or federalized. A large portion of our fellow citizens believes in individual responsibility and free enterprise. They would rather pay for their medical service and retain their self-respect and dignity. They want the freedom of individual choice.

These two groups—patriotic physicians and real liberty-loving American citizens—can be brought together through proper medical service coöperation.

It can happen here.

In all sincerity,



President, Michigan State Medical Society.



PATIENTS' ACCOUNTS

Their Relation to the Estate

By HENRY C. BLACK and ALLISON E. SKAGGS

IN DISCUSSING anything as intangible as the value of a ledger of uncollected accounts, it must be borne in mind that their collectability depends on several factors in addition to the ability of the patient to pay, namely (a) goodwill, (b) age of the account, (c) collection approach, etc. The goodwill factor usually is at its peak during a successful practice, but usually drops decidedly within a few months after the doctor's death, particularly when his patients have found other satisfactory medical service. In the same manner, the more recently the service has been rendered, the more apt, all other things being equal, is the account to be paid, while most important of all is the method by which the attempt is going to be made to collect the accounts, particularly when they become one of the doubtful assets of an estate.

In making an appraisal of accounts for estate purposes, many procedures are possible, yet averages are probably more satisfactory than any attempt to estimate the value of individual accounts. These averages should be based on a careful study of the relative percentage of collections during the past several years, whether reasonable collection procedures have been used during that period, the type of practice, goodwill, etc. In general, although our own experience in liquidations will show collections from 20 to 25 per cent of the total of all accounts outstanding at the time of the doctor's death, we believe it safe to say that the averages throughout the state of Michigan during the past ten years would not exceed 10 per cent if that.

This problem of appraisal of patients' accounts is very important in relation to taxes, both from the standpoint of income tax as well as the federal estate tax. It is most important that a fair appraisal is made in the event of death in order that the final income tax as well as the federal estate tax may be computed fairly and yet not be

excessive. For example, suppose Dr. Jones who has always filed his income tax on a cash basis, dies in March 1939, and leaves on his books unpaid business expenses of \$450.00, and uncollected accounts of \$8,000.00. The federal income tax which must be filed by the administrator or executor in March 1940 for the period from January, 1939 to the time of the doctor's death, must include not only the cash income and cash expense for that period, but also the accrued income and expense (the \$450.00 of unpaid expense items and the actual value of the \$8,000.00 worth of unpaid patients' accounts). It should not be difficult to understand why it is important that the actual value of say \$800.00 to \$1,600.00 rather than the book value of \$8,000.00 be used in computing the tax, particularly when in this case the rate of tax may go into the surtax brackets.

Of course there are many physicians whose general estate is not sufficiently large to make the question of federal estate taxes of importance, yet to those whose estate is sufficiently large this same appraisal is very important. For example, let us assume that Dr. Jones has not only \$40,000.00 of life insurance payable to named beneficiaries, but also a home worth say \$10,000.00, and other assets worth \$30,000.00. Again it is obvious why the actual value of the accounts receivable of \$800.00 to \$1,600.00 rather than the book value of \$8,000.00 be used in computing the federal estate tax, which in the first case would be negligible, and in the second case would be enough to demand a substantial tax. We have heard of cases where the accounts of an individual doctor have greatly exceeded these figures and although there should be no reason for such an accumulation, it would be very important to appraise them fairly in such a case. Similarly in any estimation of the possible estate tax while building that estate, it is imperative that not only the physical assets of the practice be computed but that the accounts be appraised and included in the computation.

In this connection, although it has been

(Continued on Page 544)

Department of Economics

L. FERNALD FOSTER, M.D., Secretary

WAGNER HEALTH BILL

S. 1620—76th Congress, 1st Session

HENRY A. LUCE, M.D.

President of the Michigan State Medical Society

DETROIT, MICHIGAN

This bill has received more attention than any other proposed health measure ever brought to the attention of those interested in public health. Not that it marks any sudden awakening of interest in health, but it appears like an attempt to capitalize in a political manner upon a topic of human interest.

No one, be he physician or layman, can be accused of lack of interest in public health. Public health, having such a general appeal and being of such accepted social value, becomes the easiest and most appealing approach to the extension of public agencies such as organized governments.

The history of the world has shown that astute politicians have quickly recognized the desirability of governmentally controlled health measures.

There is no argument between those opposed to the Wagner Bill and its proponents about the objectives of the bill. The difference of opinion is entirely in methods of approach.

Those objecting to the bill see federalized control with its potential loss of efficiency. Federal control to the liberty-loving average American means loss of an inalienable right. He might be willing to give up some so-called right were he confident that it would rebound to the general good, but there is little evidence, if any, to show that the present system needs radical change. It is freely admitted that present conditions need temporary emergency measures, but these measures should conform to generally accepted principles of distribution. The medical profession of this country yields to no group first place in the desire to conserve and protect the health of the public. Methods that have been proved and found superior to other methods are wholeheartedly supported by the medical profession. The American Medical Association's objective is and always has been public ser-

vice. The Hippocratic Oath is the oldest code of altruistic conduct of any profession.

For a period of years a certain number of people in this country have attempted to satisfy their ego drive by a social revolution of which medicine has been a part. The proponents of socialism find an easy approach towards their objectives when the attacks are directed towards health and physical welfare.

That some of the advocates of the proposals are conscientious and sincere in their hypothetical thinking can be assumed.

The first national manifestation of this stimulated trend took place in 1929 under the Committee on the Cost of Medical Care, which purposefully left in the minds of the public the first seeds of doubt of the efficiency of medical care in these United States.

Proponents of the socialization of medicine have capitalized these ideas and have presented their objectives by two methods of approach. First, by incorrect statements as to actual needs and supply; second, by propaganda to discredit the medical profession.

A committee, known as the Interdepartmental Committee to report on health and welfare, was the next national activity. This report came in July, 1938, and in substance further discredited medical services, laying open the door for socialistic thinking. Organized medicine considered their proposals later and found that the objectives were in harmony with what has always been the objectives of the profession but disagreed with the stated degree of needs. It further registered its disapproval of the methods of approach, noticeable with reference to compulsory health insurance and to the centralization of control.

The introduction into Congress of the Wagner Bill, on January 28, 1939, marked the attempt to incorporate into law the think-

ing and purposes of a group in this country who hold certain opinions regarding the rendering of health services to the people of this United States.

The Wagner Health Bill is designed under the guise of a humanitarian measure to put the Federal Government into the field of medical care and establish politically controlled medical service. It ranks with the Supreme Court packing attempt and the original reorganization efforts in its dangers to our American principles. It is even worse because its approach has a human appeal that makes it look innocuous.

One marvels at the skill of the authors of the bill—I say authors, because no one individual alone could have developed such an appealing measure with such far-reaching implications and dangers to our heritage of liberty and free enterprise as this—at least no one since the day when the Devil took the Lord to the high mountain and promised him everything did he but fall down and worship him.

Every one of the dollars for health measure—dollars that the individual states have delivered to the Federal Government—your money—must have the approval of the state plans, earmarked for it by the Chief of the Children's Bureau or the Surgeon General of the Public Health Service, or Social Security Board before the respective states can qualify.

The stage was set and the ground plans laid for the introduction of this bill and its hoped-for passage by a well-developed campaign of propaganda. The people have been led to believe that the expenditure of money alone will secure health.

The Wagner Bill, like the mosquito's bill that carries the malarial infection, if it penetrates our government, will transmit a political disease not amenable to quinine.

The Wagner Bill, in its present form, must be defeated that human liberty, individual responsibility, the right of free enterprise shall not perish, but that American traditions and Jeffersonian doctrines be maintained. American doctors of medicine will not "goose-step" for any political dictators and American medical men must not suffer their patients to be sacrificed on the altar of bureaucracy.

The ninetieth Annual Session of the House of Delegates of the American Medical Association, held in St. Louis, May 15-19, 1939, adopted without a dissenting vote

the report of the Reference Committee, which is summarized under twenty-two headings as follows:

1. The Wagner Health Bill does not recognize either the spirit or the text of the resolutions adopted by the House of Delegates of the American Medical Association in September, 1938.

2. The House of Delegates cannot approve the methods by which the objectives of the National Health Program are to be obtained.

3. The Wagner Health Bill does not safeguard in any way the continued existence of the private practitioners who have always brought to the people the benefits of scientific research and treatment.

4. The Wagner Health Bill does not provide for the use of the thousands of vacant beds now available in hundreds of church and community general hospitals.

5. This Bill proposes to make federal aid for medical care the rule rather than the exception.

6. The Wagner Health Bill does not recognize the need for suitable food, sanitary housing and the improvement of other environmental conditions necessary to the continuous prevention of disease.

7. The Wagner Health Bill insidiously promotes the development of a complete system of tax-supported governmental medical care.

8. While the Wagner Health Bill provides compensation for loss of wages during illness, it also proposes to provide complete medical service in addition to such compensation.

9. The Wagner Health Bill provides for supreme federal control; Federal agents are given authority to disapprove plans proposed by the individual states.

10. The Wagner Health Bill prescribes no method for determining the nature and extent of the needs for preventive and other medical services for which it proposes allotments of funds.

11. The Wagner Health Bill is inconsistent with the fundamental principles of medical care established by scientific medical experience and is therefore contrary to the best interests of the American people.

12. The fortunate health conditions which prevail in the United States cannot be dissociated from the prevailing standards and methods of medical practice.

13. No other profession and no other group have done more for the improvement of public health, the prevention of disease and the care of the sick than have the medical profession and the American Medical Association.

14. The American Medical Association would fail in its public trust if it neglected to express itself unmistakably and emphatically regarding any threat to the national health and well-being. It must, therefore, speaking with professional competence, oppose the Wagner Health Bill.

15. The House of Delegates would urge the development of a mechanism for meeting the needs for expansion of preventive medical services, extension of medical care for the indigent and the medically indigent, with local determination of needs and local control of administration, within the philosophy of the American form of government and without damage to the quality of medical service.

16. The fundamental question is how and when a state should be given financial aid by the Federal government out of the resources of the states as a whole, pooled in the Federal Treasury.

17. The bizarre thinking which evolves the system of Federal subsidies—sometimes called "grants-in-aid"—is used to induce states to carry on activities

DEPARTMENT OF ECONOMICS

suggested frequently in the first instance by officers and employees of the Federal government.

18. The use of Federal subsidies to accomplish such federally determined activities has invariably involved Federal control.

19. Any state in actual need for the prevention of disease, the promotion of health and the care of the sick should be able to obtain such aid in a medical emergency without stimulating every other state to seek and to accept similar aid, and thus to have imposed on it the burden of Federal control.

20. The mechanism by which this end is to be

accomplished, whether through a Federal agency to which any state in need of Federal financial assistance can apply, or through a new agency created for this purpose or through responsible officers of existing Federal agencies, must be developed by the Executive and the Congress, who are charged with these duties.

21. Such a method would afford to every state an agency to which it might apply for Federal assistance without involving every other state in the Union or the entire government in the transaction.

22. Such a method would not disturb permanently the American concept of democratic government.

MICHIGAN LEGISLATURE APPROVES VOLUNTARY GROUP MEDICAL CARE ENABLING ACT

The group medical care enabling bill (House Bill No. 215) was passed by the Michigan House of Representatives March 23, 1939, by an overwhelming majority of 78 to 5. Strong opposition was encountered

Calvert, Clancy, Courter, Dombrowski, Dykstra, Eaton, Espie, Feenstra, Fitzgerald, Gallagher, Gartner, Garvey, Gillespie, Goulette, Green, Guggisberg, Hampton, Handy, Harma, Harris, Hermann, Herrick, Higgins, Hooper, James, Jenema, Jespersen, Kaminski, Kilstrom, Kircher, Knox, Kowalski, Kronk, Landon, Legg, Loupee, MacKay, McIntosh,



SIGNING MICHIGAN'S GROUP MEDICAL CARE LAW

Governor Dickinson signed House Bill 215 on May 17, making voluntary non-profit medical care plans legal in Michigan. Left to right above are:

Ralph H. Pino, M.D., Detroit, Chairman, MSMS Committee on Distribution of Medical Care; S. L. Loupee, M.D., Dowagiac, only physician-member of the Michigan Legislature in 1939; Representative James B. Stanley, Kalamazoo, co-sponsor of the Bill; Warren G. Hooper, Albion, Chairman of the House Public Health Committee and co-sponsor of the Bill; Governor Luren D. Dickinson (seated); Senator Chester M. Howell, Saginaw, Chairman of the Senate Public Health Committee; Mrs. Dora H. Stockman, East Lansing, co-sponsor of the Bill; and Harold A. Miller, M.D., Lansing, Chairman of the Legislative Committee.

from the cultists who were insistent in their demands to be included in the group medical care bill. Through the continued and tactful personal contacts by the family physicians of the legislators, however, all damaging cult proposals were defeated.

The House Vote

Representatives voting *for* House Bill No. 215 were:

Acker, Adams (Charles P.), Adams (Clark J.), Allard, Barrett, Begick, Bird, Bolt, Braun, Buckley,

Murphy (Frank), Murphy (Jos. C.), Nagel (Jos. F.), Neller, Nichols, Odell, Post (James I.), Post (M. E.), Rawson, Remer, Root, Royce, Saul, Sawyer, Stanley, Stephens, Stockfish, Stockman, Swain, Thompson (Ruth), Thomson (John W.), Tibbits, Town, Walsh, Warner, Welsh, Weza, Wickman, Williams, Speaker.

Representatives voting *against* House Bill No. 215 were:

Graebner, Graham, Nowak, Rodesiler, Smith.

The following members were present and not voting:

Cummings, Deadman, Decker, Miles, Preston, Storey, Sumeracki, Faulkner.

The Senate Vote

Pressure from the cultists was extreme after the bill was sent to the Senate. Here again the men back home contacted their Senator friends and explained to them the merits of the proposal and emphasized the necessity for keeping damaging amendments from the bill so any corporation set up under the enabling act will be a strictly medical experiment. When the roll was called on May 4, 1939, the Senate had approved H. B. 215 without any weakening amendments.

The Senators voting for H. B. 215 were:

Baldwin, Benzie, Bischoff, Bishop, Bradley, Brake, Callaghan, DeLano, Diggs, Dignan, Dotsch, Fenner, Flynn, Hammond, Hittle, Howell, Isbister, Logie, Ludington, McCallum, Martin, Munshaw, Nowak, Paterson, Porter, Saur, Shea, Vanderwerp (Don), Vanderwerp (John), Wilkowski.

There were no votes against the bill in the Senate.

Governor Dickinson Signs Bill

Governor Dickinson signed the bill on May 17, 1939, in the presence of Harold A. Miller, M.D., Lansing, Chairman of the Legislative Committee of the Michigan State Medical Society, and Ralph H. Pino, M.D., Detroit, Chairman of the Committee on the Distribution of Medical Care. The bill became law with the signature of Governor Dickinson as the Legislature gave the bill immediate effect. Committees of the Michigan State Medical Society are now working hard on details of organizing a non-profit group medical care plan in Michigan to be designed in accordance with the provisions of the Enabling Act.

The complete text of the law follows:

Group Medical Care Enabling Act

State of Michigan
60th Legislature
Regular Session of 1939

HOUSE ENROLLED ACT NO. 65

An Act to provide for and to regulate the incorporation of non-profit medical care corporations; to provide for the supervision and regulation of such corporations by the state commissioner of insurance; and to prescribe penalties for the violation of the provisions of this act.

The People of the State of Michigan enact:

Section 1. It is the purpose and intent of this act, and the policy of the legislature, to promote a wider distribution of medical care and to maintain the standing and promote the progress of the science and art of medicine in this state.

Sec. 2. Any number of persons not less than 7, all of whom shall be residents of the state of Michigan, may form a corporation, under and in conformity with the provisions of this act, for the purpose of establishing, maintaining and operating a voluntary non-profit medical care plan, whereby medical care is provided at the expense of such corporation to such persons or groups of persons as shall become subscribers to such plan, under contracts which will entitle each such subscriber to definite medical and surgical care, appliances and supplies, by licensed and registered doctors of medicine in their offices, in hospitals, and in the home. Such other benefits may be added from time to time as the corporation may determine, with the approval of the commissioner of insurance. No contract by or on behalf of any non-profit medical care corporation shall provide for the payment of any cash or other material benefit by that corporation to the subscriber or his estate on account of death, illness or injury, nor be in any way related to the payment of any such benefit by any other agency. Medical care shall not be construed to include hospital service.

Any such non-profit medical care corporation shall be subject to regulation and supervision by the commissioner of insurance as hereinafter provided. Any such non-profit medical care corporation shall not be subject to the laws of this state with respect to insurance corporations or with respect to corporations except as provided in this act governed by the corporation laws, and no non-profit medical care corporation may be incorporated in this state except under and in accordance with the provisions of this act: *Provided, however,* That the provisions of sections 117 to 132, inclusive, of Act No. 327 of the Public Acts of 1931, as amended, and as hereafter amended, shall be applicable to all corporations formed under or governed by this act, except as herein otherwise specifically provided.

Sec. 3. The persons so associating shall subscribe to articles of association which shall contain:

First, The names of the associates, and their places of residence;

Second, The location of the principal office for the transaction of business in this state;

Third, The name by which the corporation shall be known, such name not to include the words insurance, casualty, surety, health and accident, mutual or other words descriptive of the insurance or surety business, and such name shall not be sufficiently similar to that of any insurance or surety company doing business in this or other states at the time of incorporation, to tend to create confusion in identity therewith, in the judgment of the commissioner of insurance;

Fourth, The purposes of the corporation;

Fifth, The term of existence of the corporation, which shall be for 30 years, or any multiple of 30 years, or in perpetuity;

Sixth, The time for holding of the annual meeting of the corporation;

Seventh, Any terms and conditions of membership therein which the incorporators may have agreed upon, and which they may deem it important to have set forth in said articles;

Eighth, Any other terms and conditions, not inconsistent with the provisions of this act, necessary for the conduct of the affairs of the corporation.

Sec. 4. Such articles shall be acknowledged by the persons signing the same before some officer of this state authorized to take acknowledgments of deeds, who shall append thereto his certificate of acknowledgment. All such articles shall be in triplicate.

DEPARTMENT OF ECONOMICS

cate and upon proper forms as prescribed by the commissioner of insurance. Before said articles of association shall be effective for any purpose, the same shall be submitted to the attorney general for his examination, and if found by him to be in compliance with this act, he shall so certify to the commissioner of insurance. Each corporation shall pay to the attorney general for the examination of its articles of association, or any amendments thereto, the sum of \$5.00. Each corporation shall pay to the commissioner of insurance a filing fee for its articles of association, or any amendments thereto, the sum of \$10.00. Such fees shall be covered into the state treasury for the benefit of the general fund.

Any corporation subject to the provisions of this act may, in its discretion, with the approval of the commissioner of insurance, and in the manner provided in its articles, amend its articles of association in any manner not inconsistent with the provisions of this act.

Sec. 5. The persons so associating, before entering into any contracts or securing any applications of subscribers, shall file in the office of the commissioner of insurance, together with triplicate copies of the said articles of association with the certificate of the attorney general annexed thereto, a statement showing in full detail the plan upon which it proposes to transact business, a copy of by-laws, a copy of contracts to be issued to subscribers, a copy of its prospectus, and proposed advertising to be used in the solicitation of contracts of subscribers. The commissioner of insurance shall examine the statements and documents so presented to him by the persons so associating, and shall have the power to conduct any investigation which he may deem necessary, and to hear such incorporators, and to examine under oath any persons interested or connected with the said proposed corporation. If, in the opinion of the commissioner of insurance, the incorporation or solicitation of contracts would work a fraud upon the persons so solicited, he shall have authority to refuse to license the said corporation to proceed in the organization and promotion of the association. If, upon examination of the said articles of association, the documents and instruments above mentioned, and such further investigation as the commissioner of insurance shall make, he is satisfied that (a) the solicitation of subscriptions would not work a fraud upon the persons so solicited; (b) the rates to be charged and the benefits to be provided are fair and reasonable; (c) the amount of money actually available for working capital is sufficient to carry all acquisition costs and operating expenses for a reasonable period of time from the date of issuance of the certificate of authority, and is not less than the sum of \$10,000.00; (d) the amounts contributed as the working capital of the corporation are repayable only out of surplus earnings of such corporation, and (e) adequate and reasonable reserves to insure the maturity of the contracts are provided, he shall return to such incorporators 1 copy of such articles of association, certified for filing with the county clerk of the county in which said corporation proposes to maintain its principal business office, and 1 copy to be certified by the commissioner of insurance for the records of the corporation itself, and shall retain 1 copy for his office files, and he shall deliver to such corporation a certificate of authority to commence business and issue contracts entitling subscribers to definite medical and surgical care, which contracts have been approved by him.

The said commissioner of insurance shall have power and authority, at any time to revoke, after reasonable notice and hearing, any certificate, order or consent made by him to the said corporation, to

proscribe applications for membership, upon being satisfied that the further solicitation of subscribers will work a fraud upon the persons so solicited, and he shall have authority to make such investigation from time to time as he may deem best, and grant hearings to such incorporators in their relation thereto. The commissioner of insurance shall have the same authority in respect to taking over and/or liquidating corporations formed and/or doing business under this act as is provided by chapter 3 of part 1 of Act No. 256 of the Public Acts of 1917, as amended.

Any dissolution or liquidation of a corporation subject to the provisions of this act shall be conducted under the supervision of the commissioner of insurance, who shall have all power with respect thereto granted to him under the provisions of law with respect to the dissolution and liquidation of insurance companies.

Sec. 6. The commissioner of insurance, or any deputy or examiner or any other person whom he shall appoint, shall have the power of visitation and examination into the affairs of any such corporation and free access to all of the books, papers and documents that relate to the business of the corporation, and may summon and qualify witnesses under oath, to examine its officers, agents or employees or any other persons having knowledge of the affairs, transactions and conditions of the corporation. The per diem, traveling and other necessary expenses in connection therewith shall be paid by the corporation.

Sec. 7. Each such corporation shall annually on or before the first day of March of each year file in the office of the commissioner of insurance a sworn statement verified by at least 2 of the principal officers of said corporation showing its condition on the thirty-first day of December, then next preceding, which shall be in such form and shall contain such matters as the commissioner of insurance shall prescribe. In case any such corporation shall fail to file any such annual statement as herein required, the said commissioner of insurance shall be authorized and empowered to suspend the certificate of authority issued to such corporation until such statement shall be properly filed.

Sec. 8. The board of directors of a non-profit medical care corporation shall have representation from the public and the medical profession of the state: *Provided*, That a majority of the directors shall be at all times persons approved by the officers of the medical profession duly organized to promote state-wide the science and art of medicine.

Sec. 9. A medical care corporation may, in its discretion, by its articles of association or its by-laws limit the benefits that it will furnish, and may divide such benefits as it elects to furnish into classes or kinds. In the absence of any such limitation or division of service, a non-profit medical care corporation shall be authorized to provide both general and special medical and surgical care benefits, including such service as may be necessarily incident to such medical care. A medical care corporation may, in its discretion, limit the issuance of contracts to residents of counties as specified by the by-laws.

Sec. 10. Each doctor of medicine, licensed and registered under Act No. 237 of the Public Acts of 1899, as amended, practicing legally in this state shall have the right to register with the corporation for general or special medical care, as the case may be. A non-profit medical care corporation shall impose no restrictions on the doctors of medicine who treat its subscribers as to methods of diagnosis or treatment. The private physician-patient relationship

DEPARTMENT OF ECONOMICS

shall be maintained and the subscriber shall at all times have free choice of doctor of medicine. Any employe, agent, officer or member of the board of directors of any such corporation who shall influence or attempt to influence any person in the choosing and selecting of his own physician, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished as provided by the laws of this state.

Sec. 11. A non-profit medical care corporation shall, before beginning business, and at all times thereafter while engaged in business, maintain reserves in such form and amount as the commissioner of insurance may determine. *Provided*, That the funds of any such corporation shall be invested only in securities permitted by the laws of this state for the investment of assets of life insurance companies.

Sec. 12. All medical care rendered on behalf of a non-profit medical care corporation shall be in accordance with the accepted medical practice in the community at all times.

A non-profit medical care corporation shall not furnish medical care otherwise than through doctors of medicine, licensed and registered under Act No. 237 of the Public Acts of 1899, as amended.

Sec. 13. Each non-profit medical care corporation may, in its discretion, receive and accept from governmental agencies payments covering all or part of the cost of subscriptions to provide medical care for needy persons. Each non-profit medical care corporation may in its discretion receive and accept from private agencies, corporations, associations, groups, or individuals, payments covering all or part of the cost of subscriptions to provide medical care for needy and other persons. All contracts for medical care shall be between the medical care corporation and the person to receive such care.

Sec. 14. No action at law based upon or arising out of the physician-patient relationship shall be maintained against a non-profit medical care corporation.

Sec. 15. Each corporation subject to the provisions of this act is hereby declared to be a charitable and benevolent institution, and its funds and property shall be exempt from taxation by the state, or any political subdivision thereof.

Sec. 16. Any person, or any agent or officer of a corporation, who violates any of the provisions of this act, or who shall make any false statement with respect to any report or statement required by this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished as provided by the laws of this state.

Sec. 17. Should any provision or section of this act be held to be invalid for any reason, such holding shall not be construed as affecting the validity of any remaining portion of such section or of this act, it being the legislative intent that this act shall stand, notwithstanding the invalidity of any such provision or section.

This act is ordered to take immediate effect.

MYLES F. GRAY,

Clerk of the House of Representatives.

FRED I. CHASE,

Secretary of the Senate.

May 17, 1939.

Approved LUREN D. DICKINSON.

THE WOMAN'S AUXILIARY

Organized medicine realizes today more and more the need of good public relations. State Medical Societies have devised various means of developing publicity agencies—agencies informed and equipped to disseminate facts concerning scientific medicine and the economics of the medical profession.

Obviously enough, the fountain head of good medical public relations must be the profession itself—the profession through its organized components and through its individual members. Next in the program should be those close to the medical profession and those who, by association, are cognizant of many of the facts relating to the practice of medicine. Foremost in this relationship are the physicians' wives. They live the organized medicine and share with their husbands the success or failure of its practice. They maintain, in their daily lives, a myriad of lay contacts that are not experienced by the practitioner of medicine. These contacts are usually with the thinking, civic-minded groups who desire the truth, but unfortunately do not always receive it.

It would seem, therefore, as though the component groups of organized medicine should utilize first, as public relations groups, an organization of their wives. If a Woman's Auxiliary exists within a county Medical Society, it should be instructed, advised and guided in a well developed program of medical publicity. It should not be allowed to spend its energy and enthusiasm on unimportant and irrelevant pursuits.

County Medical Societies which do not boast of Woman's Auxiliaries are missing an opportunity to sell themselves and their organization to a public anxious to know the facts.

The wives of physicians have an equal stake with their husbands in the problems of organized medicine. They have the knowledge, the enthusiasm and the public contacts. In our desire to develop real public relations, why not utilize this group within our midst?

COUNCIL AND COMMITTEE MEETINGS

1. Wednesday, May 3, 1939—Cancer Committee—Detroit Club, Detroit—6:30 p. m.
2. Thursday, May 11, 1939—Medico-Legal Committee—Hotel Porter, Lansing—6:00 p. m.
3. Sunday, May 21, 1939—Advisory Committee on Syphilis Control—Hotel Statler, Detroit—5:00 p. m.
4. Thursday, June 8, 1939—Executive Committee of the Council—Hotel Porter, Lansing—2:00 p. m.

Executive Committee of the Council

May 7, 1939

HIGHLIGHTS:

1. Incorporation of "Medical Security, Inc.," authorized in accordance with Michigan's new voluntary group medical care enabling act—the first of its kind in the United States.

2. New postgraduate program in venereal diseases outlined.

3. Representatives of the MSMS chosen to serve on the Board of Directors of the "Michigan Society for Group Hospitalization."

4. Ruling made that a physician must be in good standing in the county of his original membership before his transfer to a second county in Michigan may be accepted.

1. *Roll Call*.—Meeting was called to order at 12:30 P. M., by Dr. P. R. Urmston, Chairman, in the Statler Hotel, Detroit, with all members present.

2. *Minutes*.—The minutes of the meeting of April 16 were read and approved.

3. *Financial Report*.—The monthly financial report was presented. Bills Payable were ordered paid on motion of Drs. Moore-Carstens. Carried unanimously. The bond report was presented. Motion of Drs. Haughey-Moore that bond money (payment of interest or differences of exchange) shall in future be segregated in the M.S.M.S. books. Carried unanimously.

Motion of Drs. Riley-Carstens that necessary shelving for the Executive Office be purchased. Carried unanimously.

4. *A.M.A. Delegates*.—Drs. Gruber and Luce requested advice on various matters which might be presented in the A.M.A. House of Delegates. These were discussed by all present, and the Delegates were instructed to use their judgment in these matters in St. Louis.

5. *Wagner Bill (S-1620)*.—Report on answers of U. S. Congressmen re this proposed legislation was presented by the Executive Secretary.

6. *Committee on Distribution of Medical Care*.—Dr. Pino reported on meeting of April 26, and read the proposed Articles of Incorporation, section by section. Various charts were presented. The legal aspects would be reported to the M.S.M.S. on May 11.

Dr. Luce reported on the necessity for immediate action, through the incorporation of "Medical Security, Inc.," to prove that we are ready and willing to render service to the people. Dr. Carstens outlined the plan, step by step: (a) the employment of the executive director; (b) selection of incorporators; (c) the incorporation; (d) the selection of the board of directors of the corporation.

Motion of Dr. Brunk seconded by several that the members of the Executive Committee plus the President, President-Elect, the Secretary and the Chairman of the Committee on Distribution of Medical Care be incorporators of the new corporation, "Medical Security, Incorporated." Carried unanimously.

Mr. Burns was directed to handle the administrative details of "Medical Security, Incorporated."

Relative to securing names as members of the board of directors (including the medical men): Motion of Drs. Moore-Brunk, that each councilor be requested to send in a list of names re qualified laymen as members of the board of directors of "Medical Security, Incorporated," including a biographical sketch of each nominee. Carried unanimously. The Committee on Distribution of Medical Care recommended that representation on the

board should be had from Industry, Labor, Agriculture, Medicine, Philanthropy, etc.

A special meeting of the Executive Committee of the Council is to be called in Lansing on June 1 for the purpose of giving final approval to the Articles of Incorporation, etc., after same have been drafted by the attorney. Mr. Burns was instructed to obtain an attorney to help with the incorporation, and was also instructed to secure advice from the Insurance Department, re names of good trained insurance lawyers.

7. *Health Commissioner* Don W. Gudakunst discussed several matters: (a) the national interest relative to Michigan's voluntary group medical care experiment, and the need for one plan to cover the whole state; (b) the additional subsidies for the venereal disease program in Michigan, which are being increased from \$77,000 to \$137,000 per annum. In the past the money has been spent for the purchase of drugs, the development of laboratory service, and the education of the public. In future, additional programs can be added including the employment of persons to check lapsed cases in the larger centers. Motion of Drs. Haughey-Riley that the Executive Committee of the Council approve Dr. Gudakunst's plan in principle and refer same to the Advisory Committee on Syphilis Control, to work out the details and report back to the Executive Committee. Carried unanimously.

8. *Child Guidance Institute*. Professor L. J. Carr of Ann Arbor presented the background and work of the Child Guidance Institute, in answer to questions of the Executive Committee. He was thanked for his attendance and information.

9. *Legislative Committee report* was presented by the Executive Secretary: HB-215, HB-145, SB-129, SB-376 (Afflicted Child); HB-631 and HB-632 (Afflicted Child and Crippled Child appropriations); SB-93 and HB-392 (Use of Insanity Pleas); SB-304 (Laboratory Bill).

A letter from the President of the Michigan Hospital Association was read, thanking the MSMS for its coöperation and help in connection with the "Michigan Society for Group Hospitalization." The request of the Michigan Society for Group Hospitalization that the M.S.M.S. appoint six physicians to serve on its board of directors, was received.

Motion of Drs. Carstens-Haughey that the following names be presented to the Michigan Society for Group Hospitalization as the M.S.M.S. representatives: Drs. A. S. Brunk, Detroit; H. F. Becker, Battle Creek; S. W. Hartwell, Muskegon; Wm. S. Jones, Menominee; V. M. Moore, Grand Rapids; Wm. S. Reveno, Highland Park, and that Dr. Brunk be recommended to serve on the Executive Committee of the Michigan Society for Group Hospitalization. Carried unanimously.

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The matter of the appropriation for the Afflicted Child and Crippled Child, as presented in HB-631 and 632, was discussed. This was referred to the Legislative Committee, with the suggestion that if the Legislature insists on allotting money to counties on the basis of population for the care of these children, that all overage of state payments in each county should be paid by the state and re-billed back to the counties.

10. *Annual Meeting.* Secretary Foster reported that 33 of the 38 out of state speakers have definitely accepted, and the last five would be lined up in the next 10 days; that the Press Relations Committee has been appointed, with Dr. Duane Miller of Grand Rapids again agreeing to act as Chairman. The Executive Committee approved this report.

11. *New Sections in the M.S.M.S.* Secretary Foster stated that certain groups were discussing the possibility of creating sections. It was felt that committees would be preferable and would serve the purpose just as well as Sections. The matter was tabled for discussion at the next meeting of the Executive Committee of the Council.

12. *Medico-Legal Committee Member.* The Chair nominated the name of Dr. L. G. Christian of Lansing as a member of the Medico-Legal Committee, to take the place made vacant by the death of Dr. Angus McLean. Motion of Dr. Carstens-Riley that the appointment be confirmed. Carried unanimously.

13. *Membership Transfers.* Dr. Riley presented the problem of transfers of membership from one county in Michigan to another county in Michigan, wherein a physician does not pay all the dues in the original county. The Executive Committee ruled that a physician must be in good standing in the original county before his transfer may be accepted by the second county.

14. *"Political Medicine and You,"* a pamphlet containing interesting information, was briefly discussed and placed on the table for discussion at the next meeting of the Executive Committee of the Council.

15. *Annual Meeting of the Council* was scheduled for Sunday, Sept. 17, 1939 at Blyfield Country Club, Grand Rapids, beginning with a 6:30 p. m. dinner.

16. *Change in By-Laws.* The Executive Committee discussed the advisability of the amendment to Chapter 4, Section 4, of the by-laws, which sets a stated salary for the Secretary, and referred it to the Council at its August meeting, as a matter for possible recommendation to the House of Delegates.

17. *Meeting of National Medical Assn.* Motion of Drs. Brunk-Carstens that approval be granted to suggestion that this Association meet in Detroit in 1940.

18. *Adjournment.* The meeting was adjourned at 10 p. m.

SUPPLEMENTARY ROSTER

The following physicians, whose names did not appear in The Directory Number of THE JOURNAL, are members of the Michigan State Medical Society.

Alpena County

Hier, EdwardAlpena
Newton, W. B.Alpena

Berrien County

Hart, Russell T.Niles
King, Frank A., Sr.Benton Harbor
Vary, Edwin P.Flint

Eaton County

Sheets, A. G.Eaton Rapids

Grand Traverse-Leelanau-Benzie

Willard, W. G.Benzonia

Ionia, Montcalm

Botting, A. J.Portland
Hollard, A. E.Belding

Kent County

Bettison, Wm. L.Grand Rapids
Browning, Eugene S.Grand Rapids
Eggleston, H. R.Grand Rapids
Freyling, RobertGrand Rapids
Gibbs, F. F.Grand Rapids
Mitchell, H. C.Grand Rapids
Moleski, LeoGrand Rapids
Mollman, ArthurGrand Rapids
Pyle, H. J.Grand Rapids
Reus, Wm. F.Jamestown

Menominee County

Berg, Lawrence A.Centerville

Oakland County

Stahl, Harold F.Oxford

Oceana County

Flint, CharlesHart

Saginaw County

Button, A. C.Saginaw
Murray, Chas. R.Saginaw
Ryan, M. D.Saginaw
Sargent, Donald V.Saginaw
Test, Frederick E.Saginaw

Washtenaw County

Smith, Nelson M.Ann Arbor

Wayne County

Aaron, Charles D.Detroit
Athay, RolandDetroit
Atler, Lawrence R.Detroit

Bailey, Carl C.Detroit
Baker, Howard B.Detroit
Barnett, Louis L.Detroit
Baskt, Joseph Y.Detroit
Beach, WatsonDetroit
Berge, Clarence A.Detroit
Berris, J. M.Detroit
Bicknell, Nathan J.Detroit
Buchanan, W. Paul.Detroit
Burnstine, Julius Y.Detroit
Cadieux, Henry W.Detroit
Chapman, Everett L.Detroit
Chatel, Arthur N.Detroit
Clark, Harry L.Detroit
Clark, Raymond Lee.Detroit
Cobane, John H.Detroit
Cohen, H. H.Eloise
Cohen, H. Herbert.Eloise
Connelly, Basil L.Detroit
Crawford, Albert S.Detroit
Davidow, David M.Detroit
Dawson, F. E.Detroit
Dawson, W. A.Detroit
Diebel, William H.Detroit
Ducey, Edward F.Detroit
Eakins, Frederick J.Dearborn
Edmonds, W. N.Detroit
Eisman, Clarence H.Detroit
Falk, Ira E.Detroit
Fenech, Harold B.Detroit
Gannan, Arthur M.Detroit
Garner, H. B.Detroit
Gitlin, Charles.Detroit
Goldsmith, Joseph D.Detroit
Gruhzit, Oswald M.Detroit

Grosse Point Shores

Hackett, Andrew R.Detroit
Hammer, Charles A.Detroit
Hawkins, James W.Detroit
Hickey, JosephDetroit
Hillier, Leland G.Detroit
Hulse, Warren L.Detroit
Isaacson, ArthurDetroit
Johnson, Ralph A.Detroit
Johnston, Joseph Andrew.Detroit
Jonikaitis, Joseph J.Detroit
Joyce, Stanley J.Detroit
Juliar, BenjaminDetroit
Katzman, I. S.Detroit
Keating, Thomas F.Detroit
Kennary, James M.Detroit
Kersten, WernerDetroit

Knaggs, Charles W.Detroit
Kohn, A. Max.Detroit
Kokowicz, Raymond J.Detroit
Kopel, Joseph O.Detroit
Kovan, Dennis D.Detroit
Kulaski, Chester H.Detroit
LaFerte, A. D.Detroit
Leithauser, Daniel J.Detroit
Lilly, Vernon S.Detroit
Long, John J.Detroit
Loranger, Guy L.Detroit
Lorber, Joseph H.Detroit
Marsh, Alton Ray.Detroit
Martinez, Pedro O.Detroit
McCormick, Frank T.Detroit
McGuire, Ruth M.Detroit
McMehen, Charles E.Detroit
Merriman, K. S.Detroit
Meyers, MauriceDetroit
Moloney, J. Clark.Detroit
Nagel, Oscar.Eloise
Naylor, Archibald E.Detroit
Nolting, Wilfred S.Detroit
Noth, Paul H.Detroit
Peirce, Howard W.Detroit
Rieckhoff, Geo. C.Detroit
Rohde, Paul C.Detroit
Rosenzweig, Saul.Detroit
Rothbart, Harold B.Detroit
Rucker, Julian Joseph.Detroit
Ruskin, Samuel H.Eloise
Sandweiss, David J.Detroit
Scruton, Foster D.Detroit
Sellers, Charles W.Detroit
Shaffer, Joseph H.Detroit
Sheridan, Chas. R.Detroit
Sheridan, Charles R.Detroit
Slevin, John George.Detroit
Spitzley, William A.Detroit
Stubbs, C. T.Detroit
Swanson, Cleary N.Detroit
Tryon, MaryDetroit
Tyson, William E. E.Detroit
Van Nest, A. E.Detroit
VanRhee, George.Detroit
Wax, John H.Detroit
Wilson, Frederic S.Detroit
Wilson, John D.Detroit
Winfield, James M.Detroit
Yates, H. Wellington.Detroit
Zielinski, Charles J.Detroit
Zindler, George A.Detroit

WOMAN'S AUXILIARY

President—Mrs. P. R. Urmston, 1862 McKinley Avenue, Bay City, Michigan
Sec.-Treas.—Mrs. R. E. Scrafford, 2210 McKinley Ave., Bay City, Michigan
Press—Mrs. J. W. Page, 119 N. Wisner Street, Jackson, Michigan

Bay County

The Women's Auxiliary to the Bay County Medical Society held their regular monthly meeting, April 12, when twenty-two members met at the Elks Club for dinner at 6:15 o'clock.

Mrs. A. D. Allen, the new president, presided at her first meeting.

Plans were made for entertaining the ladies of the Saginaw County Auxiliary at a tea on Tuesday, May 9th. The tea will be held at the Bay City Country Club from 5:00 until 6:00 o'clock.

The meeting was turned over to the program chairman, Mrs. W. R. Ballard, who introduced Mrs. E. J. Mier, president of the inter-club council and district director for P.T.A., who gave an interesting talk on our present welfare legislation. Mrs. Raymond Riley then led a discussion on facts about health insurance.

Calhoun County

The Women's Auxiliary of the Calhoun County Medical Society met Tuesday evening, April 4, for seven o'clock dinner at the Fiddle and Bow. Thirty-five members and ten guests were present. Following dinner, a business meeting was held, conducted by the president, Mrs. C. G. Wencke, at which time plans were made to entertain the state president and secretary in May.

The following officers for next year were elected:

President—Mrs. Leland Keagle
President-elect—Mrs. Kenneth Lowe
Secretary—Mrs. George Slagle
Treasurer—Mrs. Richard Stiefel

Mrs. C. W. Brainard was in charge of the program, which consisted of moving pictures and travelogue by Dr. and Mrs. H. Kolvoord of their recent trip around the world.

Jackson County

The Auxiliary held its regular April meeting, Tuesday evening, the 18th, at the Hotel Hayes. Following the dinner, Mrs. Charles B. Lesser talked on her trip to Palestine last summer. Her interesting experiences were vividly portrayed by her fine choice of words. There were two state officers present, Mrs. P. R. Urmston, president, who read a brief history of the State Auxiliary, and Mrs. R. E. Scrafford, secretary.

A short business meeting was then conducted by Mrs. Alter, the president. Mrs. E. O. Leahy reported progress of the Auxiliary projects, and Mrs. Wilson gave a brief treasurer's report. Mrs. J. C. Smith, chairman of the Nominating Committee, read the following ballot, which was unanimously adopted:

President—Mrs. Arthur M. Shaeffer
Vice President—Mrs. G. R. Bullen
Secretary—Mrs. Wm. Lake
Treasurer—Mrs. N. D. Wilson

Kalamazoo County

The Woman's Auxiliary of the Kalamazoo Academy of Medicine met the evening of April 18, 1939, at the home of Mrs. Benjamin Nibbelink. A bountiful coöperative dinner was served to thirty-six members.

Mrs. S. E. Andrews reported plans for the tea to be given at the Civic Auditorium on May 5, for the Michigan State Nurses who will be in the convention here. Arrangements are being made by Mrs. Andrews with Mrs. W. O. Jennings as co-chairman.

Mrs. Ricker of the Kalamazoo Public Library staff, presented an interesting program, showing the library film and discussing the hospital service which the library maintains.

Kent County

The hobby show, thanks to the unflagging efforts of Mrs. O. H. Gillett and her committee, was most successful and Mrs. P. R. Urmston, president of the state auxiliary and Mrs. Royston E. Scrafford, secretary-treasurer of the state organization were honor guests on this occasion. More than 100 members attending the tea were enjoyably entertained with delightful musical selections and an amusing skit.

Outstanding among the exhibits was Mrs. William J. Butler's really fine woman's head which she had sculptured. Mrs. Leon DeVel showed some attractive sketches of her children and also exhibited some old world pewters. There was a doll's house completely equipped and lighted, belonging to Mrs. Robert M. Eaton. Mrs. Henry P. Kooistra displayed old medical instruments and Mrs. J. E. Meengs, a medicine cabinet 300 years old. There were fine pieces of needlework, a collection of Chinese trapestries, clothing and dishes, unusual silver spoons, old snuff boxes, old glass and even a culinary booth.

Mrs. Wallace H. Steffensen and Mrs. Joseph C. Tiffany planned the carnival and dance which took place at the Boat and Canoe Club on May 6. At the annual luncheon meeting held May 10 at Blythefield Country Club, Dr. William R. Torgerson, president of the Kent County Medical Society, was guest speaker.

Washtenaw County

The bridge tea and fashion show, given April 21 in the Michigan League by the Washtenaw Medical Auxiliary, proved to be an attractive social event as well as a successful means of raising funds for the philanthropic projects of the society.

Members of the auxiliary modeled the gowns, suits and coats from Jacobson's Store, and Mrs. Vernon S. Dick played harp selections during the show.

The coffee table, placed in the center of the con-course, was centered with an unusual arrangement of spring flowers in pastel shades. A gay spring-time effect was produced by potted geraniums placed on each of the forty tables and given later as prizes.

MICHIGAN'S DEPARTMENT OF HEALTH

MICHIGAN'S DEPARTMENT OF HEALTH

DON W. GUDAKUNST, M.D., Commissioner
LANSING, MICHIGAN

LOCAL HEALTH DEPARTMENTS HONORED

Seven city and county health departments in Michigan have been awarded honors in the annual National Health Conservation Contest sponsored by the American Public Health Association and the Chamber of Commerce of the United States.

Top honors in its class went to Grand Rapids for the most effective public health program in 1938 among all United States cities of 100,000 to 250,000 population. Dr. John Lavan is director of this department. Detroit's health department under the direction of Dr. Henry F. Vaughan again received a special award among cities which have won first awards on two or more previous occasions.

In the Rural Health Conservation Contest, financed by the W. K. Kellogg Foundation of this state, Michigan's rural health departments took five of the eight awards of merit in the northeastern district. Departments thus honored and their directors include the following: Mecosta-Osceola District Health Department, Dr. M. C. Igloe; District No. 7 Health Department including Clare, Gladwin and Arenac counties, Dr. E. V. Thiehoff; Saginaw County Health Department, Dr. V. K. Volk; Alger-Schoolcraft Health Department, Dr. E. J. Brenner; and Chippewa County Health Department, Dr. David Littlejohn.

Awards are made not necessarily to the healthiest communities, but rather on the effectiveness with which each community is meeting its health problems. Each community is appraised on what measures it takes: 1. To provide and safeguard its water supply; 2. To furnish adequate and safe sewage disposal; 3. To reduce infant and maternal deaths; 4. To combat tuberculosis and syphilis; 5. To protect its citizens against other communicable diseases; 6. To insure healthy children; 7. To protect and safeguard its milk and other foods; 8. To promote effective coöperation with its physicians and dentists in furnishing necessary services to all those who need them; and 9. To enlarge and improve its lay-understanding of ways and means of preventing sickness and death and of maintaining good health.

TUBERCULOSIS CONTROL INSTITUTES

The Michigan Department of Health is sponsoring a series of institutes on tuberculosis control which will be held for public health personnel throughout the state starting May 15.

The institutes will be held at Gaylord May 15 and 16, at Powers May 18, Escanaba May 19, Mt. Pleasant May 22 and 23, and Lansing May 25 and 26. In addition to the personnel of the local health departments, a cordial invitation to attend has also been extended to other interested nurses and physicians.

The program of the institutes will feature the medical aspects of tuberculosis control and the part played by the public health nurse. The diagnosis and treatment of tuberculosis from the point of view of the sanatorium specialist will also be presented.

The institute speakers will include Miss Helen

Bean, R.N., director of the Bureau of Public Health Nursing, and Dr. A. W. Newitt, director of the Bureau of Epidemiology, of the Michigan Department of Health; Miss Fannie Eshleman, supervisor of nurses at the Henry Phipps Institute of Philadelphia; Miss Blanche Harstine, R.N., of the Detroit Department of Health; Mr. T. J. Werle of the Michigan Tuberculosis Association; Dr. J. W. Towey of the Pinecrest Sanatorium at Powers; Dr. Joseph Egle, superintendent of the Northern State Sanatorium; Dr. A. D. Calomeni of the Saginaw County Tuberculosis Hospital; and Dr. C. J. Stringer of the Ingham County Tuberculosis Sanatorium.

COMMUNICABLE DISEASE PREVALENCE

A report of communicable disease prevalence during the first quarter of 1939 compiled by the Bureau of Records and Statistics indicated that scarlet fever had the highest incidence during this period. There were 6,902 cases of scarlet fever reported during the quarter compared with a five-year mean of 6,721 cases for the same period.

Whooping cough was below the norm with 2,754 cases reported compared with the mean of 3,200 cases. Diphtheria cases totaled 131 for the quarter compared with the mean of 155.

Pneumonia cases totaled 1,729 compared with the mean of 2,040. Reported cases of tuberculosis were above the five-year mean of 1,382 cases. There were 1,518 cases reported during the first quarter of 1939.

Smallpox cases continue to show an increasing incidence, indicating the need for more wide-spread vaccination of susceptible persons. There were 177 cases reported during the first quarter, whereas the five-year mean for this period was but 39 cases. Measles cases dropped far below the five-year mean of 12,043 cases, there being but 4,768 cases reported during the first quarter.

Twenty cases of typhoid fever were reported compared with the mean of 43 cases. Meningitis cases totaled eight compared with the mean of 24. There was one case of poliomyelitis compared with the mean of six cases.

Syphilis case reports continue to increase as they have for the past few years as a result of the wide-spread educational campaign in this field. There were 3,440 cases of syphilis reported during the first quarter of 1939. The five-year mean reported for this period was 2,022 cases. Gonorrhea case reports have not kept pace with the increase in syphilis reports and fell below the five-year mean for the first quarter of 1939. There were 1,468 cases of gonorrhea reported compared with the five-year mean of 1,533 cases.

NEW COUNTY HEALTH DEPARTMENT

The St. Joseph County Board of Supervisors by unanimous vote have approved the organization of a full time county health department for that area, thus becoming the 60th Michigan county to organize such a full time local health service.

The action of the board of supervisors followed a survey of similar departments operating in other counties which had been made by a committee of physicians and supervisors. The new department will be organized as soon as the usual state and federal subsidies can be arranged.

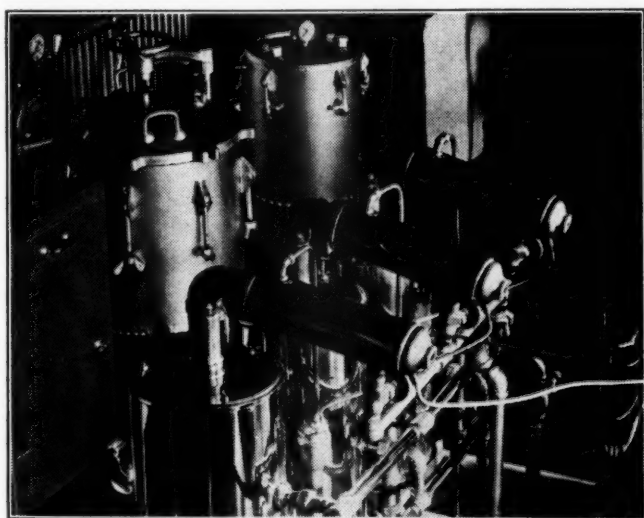
With but 23 counties not yet provided with health departments, Michigan is approaching its objective of full time health service under local supervision in every county. No county which has organized such a department since the 1927 enabling act has ever discontinued the service.

(Continued on Page 530)

✓✓✓ TRIPLE-CHECK FOR ABSOLUTE PURITY

More and more physicians are depending upon the J. F. Hartz Laboratory for pharmaceuticals that are **pure**.

Since 1897, the Hartz Laboratory has endeavored to manufacture and supply the medical profession with pure, dependable, modern pharmaceuticals at fair prices; and to give the best possible service.



As illustrated above, water in Hartz products is made extra safe with triple-distillation. No air exposure. Multiple traps and baffles insure extra purity.

This distilled water is chemically and bacteriologically pure,

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IT HAS STOOD THE TEST

THE one urge that transcends all others in the physician's mind when he prescribes a feeding formula for a baby is to obtain the best physical development of which the child is capable.

We are continually receiving very gratifying reports from physicians who prescribe Lactogen in their infant feeding cases. Furthermore, extensive tests of Lactogen feeding on large groups of infants under supervision of competent pediatricians have proved to their satisfaction that Lactogen is very successful as a routine infant food as well as for the supplemental feeding of the newborn.

If you have not as yet tried Lactogen, we urge you to do so.



No laity advertising. No feeding directions given except to physicians.



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DENTISTRY FOR CHILDREN

A series of postgraduate lectures and clinics in dentistry for children will be sponsored by the Bureau of Public Health Dentistry of the Michigan Department of Health during the latter part of May and the first three weeks in June. The Postgraduate Division of the University of Michigan School of Dentistry is coöperating in this program.

The course combining a day of operating with an evening lecture-clinic and discussion will be open to practicing dentists at 29 centers throughout the state. The dentists taking the course will be limited to 12 in each place. There is no tuition fee. The lecturers and clinicians, who have had much training in children's dentistry, will include Drs. D. G. Bills of Lansing, S. C. Brown of Ithaca, E. V. Finley of Union City, R. B. Fox of the Michigan Department of Health, W. J. Pelton of the United States Public Health Service, A. E. Seyler of Detroit, C. R. Taylor of Kadoka, South Dakota, and H. M. Wilbur of Plainwell.

The course in dentistry for children will be offered at the following centers: Adrian, Bad Axe, Benton Harbor-St. Joseph, Big Rapids, Birmingham, Cadillac, Dearborn, Flint, Greenville, Howell, Ionia, Lapeer, Ludington, Manistee, Midland, Monroe, Mount Clemens, Muskegon, Niles-Dowagiac, Owosso, Petoskey, Pontiac, Sandusky, Sturgis-Three Rivers, Traverse City, Vassar, West Branch, Wyandotte, and Ypsilanti.

The complete program may be obtained upon request from the Bureau of Public Health Dentistry, Michigan Department of Health, Lansing.

NEW LABORATORIES REGISTERED

The Bureau of Laboratories has announced that the following laboratories have been registered for making examinations in the serodiagnosis of syphilis:

Grosse Pointe Hospital Laboratory (Reg. No. 244), 4535 Cadieux Road, Grosse Pointe, Michigan.

Kalamazoo State Hospital Laboratory (Reg. No. 48), Kalamazoo, Michigan.

Oaklawn Hospital Laboratory (Reg. No. 204), Marshall, Michigan.

Bagley Medical Group Laboratory (Reg. No. 245), 12922 W. Warren Avenue, Dearborn, Michigan.

Goodrich General Hospital Laboratory (Reg. No. 246), Goodrich, Michigan.

The editor of the *Malaya Tribune*, Selangor, F.M.S., received the following letter from a native who was applying for a position:—

"Dear sir, very honored and respected.

"I asking for job. I can do any kind of works by virtue of my flexible brain and very advanced training. I passed matriculation in a very large college in —

"The flexible brain I have in my possession will bend towards any kind of works your honor yoking on me. I mathematics passing very good credit, making very good machine-like work; modern calculating machine simply eclipsed by my brain. English I passing with credit so I can be burdened with correspondence writing. . . .

"If your honor will be good enough to employ me, I will in duty bound always pray for your honor's long life. My prayers have always been heard as I always pray very loud. If wanting my services, I can come suddenly. Putting myself at your honor's large feet, I pray to become your honor's humble and faithful servant. I remain, your Godsend servant."—*Efficiency Magazine*.

JOUR. M.S.M.S.

CORRESPONDENCE

CORRESPONDENCE

Berrien County Medical Society
Benton Harbor, Michigan
April 24, 1939.

L. Fernald Foster, M.D.,
328 Shearer Building,
Bay City, Michigan.

Dear Dr. Foster:

At the last meeting of the society I was instructed to write and inform you that Berrien County Medical Society supported the work of the Michigan State Medical Society on the question of Hospitalization and Sickness Insurance and further that it would support the society in its work along this line with the present session of the Michigan State Legislature.

Yours truly,
R. C. CONYBEARE, M.D., *Secretary*.

* * *

May 3, 1939.

Dr. L. Fernald Foster,
Secretary of M.S.M.S.,
2020 Olds Tower,
Lansing, Michigan.

Dear Sir:

In this peculiar day and age the physician is the easiest prey for those people who try to get something for nothing and use no discretion in the tactics employed to gain their goal. To guard against just such undesirable situation what could be better than to have the protection of the Michigan State Medical Society?

I have been a member of the M.S.M.S. for a good many years and yet had no opportunity to know nor to investigate their various activities. Memberships in societies can become a habit of just paying yearly dues! Until recently the marvelous work done by the society towards those who encounter unavoidable and unnecessary legal controversies was definitely placed in the background and thus one of the Michigan State Medical Society's strong talking points meant nothing to me.

The rapidity with which the organization rallies to the cause of protecting its members from embarrassing legal cases and the responsibilities it undertakes for those in trouble not only helps to prevent grey hair but saves an amiable disposition as well.

What could be more gratifying than a friend in need—one to confide in and trust in your distress! The Michigan State Medical Society is just such a friend, a friend that comes to your aid without question, helps greatly in your urgent need.

With only *one* of the M.S.M.S. marvelous activities mentioned, namely, legal aid, it is worth becoming a member of the society and protecting yourself from unforeseen probabilities, and at the same time saving your good disposition!

Sincerely,
(Signed) ROMAN SADOWSKI, M.D.

* * *

May 8, 1939.

Michigan State Medical Society,
L. Fernald Foster, M.D., Secretary,
Lansing, Michigan.

Dear Doctor Foster:

I am pleased to write and express my appreciation of the help given me by the Michigan State Medical

JUNE, 1939

CADILLAC 2494

"VANOL"
A
GREASELESS BASE
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OINTMENTS

Vanol is a greaseless petroleum product with an aqua absorption of at least twenty-five per cent. It's neutral and will not dry up or leave the skin dry.

Vanol will carry any medication that petrolatum will carry, and the medication becomes immediately active on application and penetrates instantly to the source of irritation. Products made with the Vanol base are clean to apply and thirty to fifty per cent more absorbent and effective than those made with the old traditional grease base.

Vanol is unconditionally guaranteed.

Detailed by request.

P. S. You will be surprised at the effectiveness of Ephedrine prepared with the Vanol base.

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CORRESPONDENCE

Society in the medico-legal case which you referred to.

I can very truthfully say that the one bright spot in the whole affair was the splendid feeling shown me and the spirit of coöperation displayed by the members of my local Medical Society and the Michigan State Medical Society.

It is certainly a real satisfaction, at a time like this, to know that you have the Michigan State Medical Society behind you and can count on them for help which was given courteously and efficiently in my case.

Thank you,
Fraternally yours,
(Signed) FRANK L. BULL, M.D.

* * *

May 5, 1939.

L. F. Foster, M.D.,
Sec'y Mich. State Medical Society,
Lansing, Michigan.

Dear Doctor Foster:

The benefits of membership in our County and State Medical Society cannot, in my opinion, be over-emphasized.

As a member of our County and State Medical Society for over thirty years, I know what such membership stands for. Practically all members of our Bay County Society know and call each other by their first name. So it can be imagined the good and helpful feeling which exists. The young medical men are brought into membership and made to see and feel that they are an important unit of a great medical fraternity. We have practically all the medical men in this locality in our Bay County Society.

Our business and scientific meetings twice a month keep us all on our toes and up to the minute in modern medical knowledge.

Membership in the State Society carries with it legal defense in threatened malpractice, and besides the practical defense furnished members so threatened. The moral effect of having all the membership of the great State Society behind you is very comforting.

I urge all medical men not members to immediately contact the Secretary of their County Society and join up. In unity is strength.

Sincerely yours,
(Signed) JOSEPH C. GROSJEAN, M.D.

TERRIBLY DENSE

A school teacher asked her class in what part of the world the most ignorant people were to be found.

A small boy volunteered quickly, "In London, England."

The teacher was amazed and questioned the lad as to where he had obtained such information.

"Well," he replied, "the geography says that's where the population is most dense."—*Halifax Mail*.

THE RIGHT GLASSES

The shortsighted man went into the shop for a pair of cheap spectacles. He tried pair after pair until he got one which suited him perfectly.

He put them on and walked into the street. First thing he saw was a hawker selling grapes from a handcart.

"I think I'll take a bunch of these balloons home to the kids," he said.—*Vancouver Sun*.

To Complete the Picture Enjoy

WHOLESOME, REFRESHING Chewing Gum

Doctors welcome for themselves and for those whose health they guard, the outdoor life and relaxation of the summertime... And the healthful enjoyment of Chewing Gum has its part, too. Most everybody enjoys the delicious taste and refreshment of Chewing Gum. So don't overlook this, doctor, when you say "relax, ease-up and enjoy yourself!"

Four Factors which help lead to Good Teeth are: (1) Proper Food, (2) Personal Care, (3) Seeing Your Doctor and Dentist regularly and (4) Plenty of Chewing Exercise.

The National Association of Chewing Gum Manufacturers, Staten Island, New York

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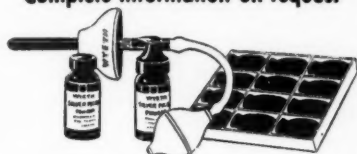
IN MEMORIAM

**A
CONVENIENT OFFICE
TREATMENT FOR
TRICHOMONAS
VAGINITIS**

THIS simple treatment requires but two office visits, a week apart, for insufflations and the nightly insertion of a Silver Picrate suppository for twelve nights.

Complete remission of symptoms and removal of the trichomonad from the vaginal smear usually is effected following the Silver Picrate treatment for trichomonas vaginitis.

Complete information on request



SILVER PICRATE

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JOHN WYETH & BROTHER, INCORPORATED, Philadelphia, Pa.

IN MEMORIAM

Maurice Brodie, M.D.

Dr. Maurice Brodie, Associate Pathologist of Providence Hospital, Detroit, died very suddenly on May 9, while on duty at the hospital. The cause of death was angina pectoris. Dr. Brodie was thirty-six years old, having been born at Liverpool, England, in 1903. His parents, Mr. and Mrs. Samuel Brodie, moved to Ottawa, Ontario, when the boy was eight years old. Dr. Brodie was educated at Ottawa and McGill University, where he received his M.D. degree in 1928. Notwithstanding his youthfulness, Dr. Brodie had already won a wide reputation for his researches in infantile paralysis. In 1934, he was in charge of the infantile paralysis research for the New York City Health Department. Seven months ago, he was married to Miss Edna Finger of New York, who survives him. Dr. Brodie was a member of a number of medical and research organizations. The funeral services were held at the family home in Ottawa, Ontario.

Dr. Conrad Georg

Conrad Georg, M.D., of Ann Arbor, died on April 15, 1939. He had practiced medicine and surgery in Ann Arbor for forty years, and was a former member of the University of Michigan medical faculty. Dr. Georg was born in 1874, the son of a distinguished physician. In 1896, he was graduated from the University of Michigan and in 1899, from

the Medical College of the University. He served for fifteen years as a demonstrator of surgery in the medical school, and later was head of the first x-ray department in the University Hospital. He purchased the first x-ray machine in Ann Arbor in 1904, which machine is now in the University Hospital Museum. Dr. Georg was a member of the Washtenaw County Medical Society, the Tri-State Medical Society, and a charter member of the Thoracic Surgery Society. He is survived by his wife, Katherine Haller Georg; a son, Conrad III; two daughters, Martica and Lucille; a brother, Henry; and four sisters, Mrs. L. Gandy, Mrs. Reuben Schmidt, Miss Louise Georg and Mrs. Joseph Black.

Dr. David A. Jamieson

David A. Jamieson, M.D., of Arcadia, Michigan, died suddenly at Bear Lake, Michigan, May 12, 1939. He was born at Bowmanville, Ontario, December 8, 1865. He was educated in the Bowmanville schools and later taught in the public schools for four years. Coming to the United States, he attended the Detroit College of Medicine, graduating in the class of 1894. That same year he came to Manistee County, locating at Arcadia, and practicing there continually to the time of his death at the age of seventy-four years, five months and five days.

During his forty-five years of practice in Arcadia, Dr. Jamieson attended his flock as only a country doctor of the old school knows how, and he leaves a sorrowing community to mourn his passing. Arcadia has lost a capable physician and Manistee County a good citizen.

Dr. Jamieson was always a kindly, courteous gentleman, with the best interests of his patients and his fellow practitioners at heart. While living the farthest away, he attended the meetings of his

IN MEMORIAM

County Society with great regularity, and at the time of his death was president of the Manistee County Medical Society. He was buried with Masonic rites, and the bearers were members of the County Society.

Horace P. Mellus, M.D.

Dr. Horace P. Mellus, aged fifty-one years, of Brighton, Michigan, died in Detroit, April 18, 1939, of heart disease. He had had several heart attacks during the past two years, in spite of which he enjoyed a rather active life during that period.

Dr. Mellus was born in Detroit, January 28, 1888, graduated from the Central High School and from the Detroit College of Medicine in 1914. After serving an internship at Harper Hospital he came to Brighton, where he remained until his death. During his active practice, he took post-graduate work under Dr. Angus McLean, at the Mayo Clinic, and in Vienna. He was a member of the Livingston County Society, Michigan State Medical Society, and American Medical Association. He owned and operated the only hospital in Brighton from 1921 until the present time, an institution of state-wide acquaintance.

As a contributor to his community he was a great example. He was the founder of the Brighton Rotary Club, and a great admirer of Masonry—he was a member of the Brighton Lodge No. 247, F. and A. M. Livingston Chapter No. 30, R.A.M., and Howell Commandery No. 28 Knights Templar. He was also a member of Moslem Temple Mystic Shrine in Detroit. One of the tragedies in connection with his death was that he died just as he was about to receive the several degrees in De-

troit Consistory of the Scottish Rite. In appreciation of the fine citizenship of Dr. Mellus, the Consistory Class of which he would have been a member voted to take the name "The Horace Peter Mellus Class."

Dr. Mellus is survived by his wife, two sisters, and a brother, who is a dentist in Vicksburg.

Hillis D. Rigterink, M.D.

Dr. Hillis D. Rigterink, of Grand Rapids, died in April, following an operation. He was born at Freeport, twenty-six years ago, and was graduated from the Ottawa Hills High School in 1930. Later, he attended Oberlin College and was graduated from the University of Michigan Medical School in 1937. He was a member of the staff of St. Mary's hospital, also the Kent County Medical Society. Surviving are his wife, Martha; his parents, Dr. and Mrs. John W. Rigterink of Grand Rapids; two sisters, Mrs. C. Supernau of Detroit, and Helen; and his grandparents, Mr. and Mrs. D. Godfrey of Freeport.

INSPECTOR'S OVERSIGHT

The stranger ambled into the farmyard and was challenged by the farmer. With an air of great importance the stranger produced his card and remarked:

"I am a Government inspector and am entitled to inspect your farm."

Half an hour later the farmer saw the inspector being chased by a bull in the field. Leaning over the gate as the inspector dashed toward him, the farmer cried: "Show him your card, mister—show him your card!"—*Edmonton Bulletin*.

E M I N E N T

WORLD LEADERS have, by
their patronage, established The
Drake as an address of distinction. Here
refined luxury, thoughtful service, and
choice location delight the discriminating.

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◆ General News and Announcements ◆

The 100 Per Cent Club of the Michigan State Medical Society

Branch County Medical Society
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Delta-Schoolcraft
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Huron-Sanilac
Ingham
Ionia-Montcalm
Lapeer
Livingston
Luce
Manistee
Mecosta-Osceola-Lake
Menominee
Midland
Muskegon
Newaygo
O.M.C.O.R.O.
Oceana
Ontonagon
Ottawa
St. Joseph
Shiawassee
Tuscola
Wexford-Kalkaska-Missaukee

Other County Medical Societies are near the 100 per cent mark—being out of the honorary club by just one or two members not having paid 1939 dues. Help your society to be in the 100 Per Cent Club.

M. A. Surrell, M.D., Newberry, has been elected Secretary of the Luce County Medical Society to fill the vacancy left by the death of C. D. Hart, M.D.

* * *

Dr. A. E. Voegelin addressed the East Side Medical Society at its meeting on April 27 on the subject of "Circulation Times and Venous Pressure."

* * *

Alexander W. Blain, M.D., of Detroit, was recently appointed a member of the Michigan Conservation Commission by Governor Dickinson. Congratulations!

* * *

L. G. Christian, M.D., Lansing, has been appointed as a member of the Medico-Legal Committee, M.S.M.S., to fill the vacancy left by the death of Angus McLean, M.D. of Detroit.

* * *

Dr. Carl V. Weller, professor of pathology at the University of Michigan Medical School, was elected president of the American Association of Pathologists at the annual meeting at Richmond, Virginia, held on April 5 to 7.

* * *

The Michigan Conference on Mental Hygiene in Child Welfare was held in Grand Rapids at the Hotel Pantlind, April 20 to 22, 1939. The conference was the third annual session sponsored by the Michigan Society for Mental Hygiene.

* * *

The seventieth anniversary of the medical department of Wayne University will be observed on Wednesday, June 14, in a program for the annual

alumni clinic at the Receiving Hospital, Detroit. A number of class reunions will be observed also on this date.

* * *

Ralph H. Pino, M.D., and *Warren B. Cooksey, M.D.*, were installed as President and Secretary respectively of the Wayne County Medical Society at its annual meeting of May 15, 1939. *Allan W. McDonald, M.D.*, was made President-Elect.

* * *

The National Commission on Graduate Medical Education in its three-year study singles out Michigan from 24 states maintaining programs of continuing education in Medicine, as the only one in which the ideal in principle and practice is being approximated.

* * *

A residency in tuberculosis at the American Legion Hospital at Battle Creek, Michigan, will be open beginning July 1, 1939. Anyone interested in this unusual opportunity to secure outstanding training and experience in the treatment of tuberculosis should write *W. L. Howard, M.D.*, Medical Director, American Legion Hospital, Battle Creek, Michigan.

* * *

The American Congress on Obstetrics and Gynecology sponsored by the American Committee on Maternal Welfare, Inc., will be held in Cleveland, Ohio, September 11 to 15, 1939. The program is designed to be of interest and help to members of all branches of the practice of medicine. All members of the medical profession are cordially invited to attend the Congress in Cleveland.

* * *

The following articles appearing in *The Journal of the American Medical Association* were contributed by Michigan physicians: "Chondro-Epiphysitis" by *Robert L. Schaefer, M.D.*, *Fred L. Strickroot, M.D.*, and *Frank H. Purcell, M.D.*, Detroit, issue of May 13, 1939; "Intersexuality" by *Robert C. Moehlig, M.D.*, and *Norman M. Allen, M.D.*, of Detroit, issue of May 13, 1939.

* * *

The William J. Mayo Annual Lecture at the University of Michigan was delivered by *Dr. Harold I. Lillie*, on April 28. His subject was "The Correlation of the Special Practice of Otolaryngology with General Practice of Medicine." *Dr. Lillie*, a graduate of the University of Michigan Medical School in 1912, is professor of Otolaryngology in the graduate school of the University of Minnesota.

* * *

The successful candidates for office voted on by the Membership Committee of the Wayne County Medical Society are: President-elect, *Allan McDonald, M.D.*; secretary, *Warren B. Cooksey, M.D.*; trustee, *Henry R. Carstens, M.D.* Medical Section—Chairman, *R. L. Novy, M.D.*; secretary, *R. C. Connelly, M.D.* Surgical Section—Chairman, *W. D. Barrett, M. D.*; secretary, *E. G. Krieg, M.D.*

* * *

The 18th Annual Scientific and Clinical Session of the American Congress of Physical Therapy will be held September 5 to 8, 1939, at Hotel Pennsylvania, New York City. Preceding these sessions the Congress will conduct an intensive instruction seminar in physical therapy for physicians and technicians—August 30, 31, September 1 and 2. For further information address the American Congress of Physical Therapy, 30 No. Michigan Avenue, Chicago.

GENERAL NEWS AND ANNOUNCEMENTS

Now is the time to write for your hotel reservation in Grand Rapids, if you are planning to attend the 1939 Grand Rapids Convention of the Michigan State Medical Society next September 19 to 22, inclusive. The Hotel Pantlind, which is connected by underground passage with the Civic Auditorium, has 750 rooms. Single rooms are available from \$2.50 to \$5.00; double rooms from \$4.50 to \$8.00.

* * *

The American Public Health Association has recently adopted five Reports dealing with Educational Qualifications of Public Health Statisticians, School Health Educators, Public Health Engineers, Sanitarians, and Sub-Professional Field Personnel in Sanitation. If you are interested in any of these reports, you may receive a free copy by writing the Book Service, American Public Health Association, 50 West 50th Street, New York City.

* * *

The Wayne County Medical Society will sponsor in the fall of 1939 a postgraduate training for general practitioners. The postgraduate teaching program next year will be carried on with the aid and coöperation of Wayne University College of Medicine and local hospital. The tentative schedule has been arranged at Receiving Hospital under the direction of Gordon Myers, M.D., Professor of Medicine, Wayne University College of Medicine.

* * *

Examinations for certification by the American Board of Internal Medicine will be held in various sections of the United States on the third Monday in October and the third Monday in February. Formal application must be received by the Secretary before August 20, 1939, for the October 16 examination; before January 1, 1940, for the February, 1940, examination. Application forms may be obtained

from Wm. S. Middleton, M.D., Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin.

* * *

At a meeting of the Detroit Obstetrical and Gynecological Society of May 2, 1939, the constitution was amended, allowing this society to change its name to the "Michigan Society of Obstetricians and Gynecologists." This will enable the Society to widen its scope and its influence because of a state-wide membership. The officers elected were as follows: Harry M. Nelson, M.D., Detroit, President; Russell W. Alles, M.D., Detroit, Vice President; Howard C. Walser, M.D., Detroit, Secretary; Milton A. Darling, M.D., Detroit, Treasurer.

* * *

Crippled and Afflicted Child Commitments for April, 1939, were as follows:

Crippled Child: Total cases, 863, of which 241 were sent to University Hospital and 622 to miscellaneous hospitals. Of the above, Wayne County sent 6 to University Hospital and 48 to miscellaneous hospitals for a total of 54 cases.

Afflicted Child: Total cases, 1,445, of which 203 were sent to University Hospital and 1,242 to miscellaneous hospitals. Of the above, Wayne County sent 33 to University Hospital and 339 to miscellaneous hospitals, for a total of 372.

* * *

On the afternoon of May 8, ground was broken for the new three hundred thousand dollar unit of the Detroit Tuberculosis Sanitarium, on the grounds of the present sanitarium at Tuxedo and Twelfth Streets, Detroit. The new institution will be named after Dr. Burt R. Shurly, who has been the leading spirit in fostering the Detroit Tuberculosis Sanitarium for thirty years. The addition will contain ninety beds besides operating and x-ray rooms and laboratory space for medical research. The sanita-

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GENERAL NEWS AND ANNOUNCEMENTS

rium is financed by the annual sale of Tuberculosis Christmas Seals. Eighty thousands dollars was realized from the sale of Christmas seals in 1938.

* * *

Notice to secretaries of county medical societies: The Executive Committee of The Council requests all county medical societies to certify the names of members for whom Honorary or Retired or Emeritus or Associate Membership in the State Society will be sought next September, to the Executive Office, 2020 Olds Tower, Lansing, thirty days in advance of the annual meeting. The name of any physician, to be recommended by his county medical society to the House of Delegates, should be certified to the Lansing Office not later than August 18, 1939, in order that the records may be checked.

* * *

The Michigan Legislature approved the bill amending the prenuptial physical examination law, which makes it possible for an individual with a Wassermann-Fast blood test to obtain a license to marry. The law now provides for the appeal of these cases to a board. The law as it is now written represents a great amount of work and thought and it is hoped will eliminate the injustices of the original act. The full text of the law will appear in a subsequent issue of THE JOURNAL.

The Legislature also approved a bill which will require serological blood test to be made on all women who are pregnant. This law will also be published in THE JOURNAL.

* * *

Samuel B. Gross Prize of the Philadelphia Academy of Surgery of \$1,500 is awarded every five years to the writer of the best original essay, not exceeding 150 printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice founded upon original investigations, the candidates for the prize to be American citizens. Essays to be acceptable must be received by the Trustees of the Samuel B. Gross Prize of the Philadelphia Academy of Surgery, c/o The College of Physicians, 19 South Second Street, Philadelphia, on or before January 1, 1940. For further information write to the above address.

* * *

Louis N. Katz, M.D., Director of Cardiovascular Research at Michael Reese Hospital, offers a full-time intensive course in electro-cardiography for two weeks, August 21 to September 2, 1939. The course is designed for the general practitioner, and will consist of practice on several electro-cardiograph machines and discussion of the principles of their construction and use. There will be sessions on interpretation of electro-cardiograms illustrated by lantern slides and practice on the students with unknown records. If you are interested, further information may be obtained by writing Michael Reese Hospital, Cardiovascular Department, 2839 Ellis Avenue, Chicago, Ill.

* * *

The annual spring clinic of the Providence Hospital Interne Alumni Association was held on May 10 and 11 in Martha Higgins Auditorium. "Pituitary Disease" was discussed by Mark McQuiggan, M.D., Russell Costello, M.D., and L. J. Bailey, M.D. "The Determinant of Adequate Dosage in the Use of Short Wave Diathermy" was presented on May 11 by Milton D. Schmitt, M.D., of Chicago; and John S. Davis, Jr., M.D., of New York City, presented the subject of "Rheumatism—Diagnosis and Treatment." "The Use of X-ray in the Prevention and Treatment of Certain Infections with a Mobile Unit" was discussed by James F. Kelly, M.D., of Omaha, Nebraska. Golf, followed by dinner at Grosse Ile Golf and Country Club, was enjoyed in the afternoon.

JUNE, 1939

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MEDICINE—Two Weeks' Course, Gastroenterology, June 19, September 25. Two Weeks' Personal Course, Electrocardiography, August 7. Special Courses in August. Two Weeks' Course, October 9.

SURGERY—General Courses: One, Two, Three and Six Months; Two Weeks' Intensive Course in Surgical Technique with practice on living tissue; Clinical Courses; Special Courses. Courses start every two weeks.

GYNECOLOGY—Two Weeks' Personal Course, June 19; Four Weeks' Personal Course, August 28. Two Weeks' Course, October 9.

OBSTETRICS—Two Weeks' Intensive Course, June 19, October 23. Informal Course every week.

FRACTURES AND TRAUMATIC SURGERY—Ten-day Formal Course, June 19, September 25. Informal Course every week.

OTOLARYNGOLOGY—Two Weeks' Intensive Course starting September 11. Informal Course every week.

OPHTHALMOLOGY—Two Weeks' Intensive Course starting September 25. Informal Course every week.

CYSTOSCOPY—Ten-day Practical Course, rotary every weeks. Urology Courses every two weeks.

ROENTGENOLOGY—Special Courses X-ray Interpretation, Fluoroscopy, Deep X-ray Therapy starting every week.

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The Twelfth Graduate Fortnight of the New York Academy of Medicine will be held from October 23 to November 3, 1939. The subject of this year's Fortnight is the Endocrine Glands and Their Disorders. The purpose of the Fortnight is to make a complete study and authoritative presentation of a subject of outstanding importance in the practice of medicine and surgery. The New York Academy of Medicine provides this program for the fundamental purpose of medical education. Consequently, all members of the medical profession are eligible for registration. A complete program and registration blank may be secured by addressing Mahlon Ashford, M.D., New York Academy of Medicine, 2 East 103rd Street, New York City.

* * *

The University of Michigan Hospital Bulletin, announcing its cooperation with the Michigan Society of Group Hospitalization, offers the following interesting bit of news on the Group Hospital Insurance Movement elsewhere: "It is interesting to note that group budgeting for hospital care was started at Baylor University, at Dallas, Texas, in 1930. The American Hospital Association has promoted this type of cooperation, and on January 1, 1939, more than 800 outstanding hospitals in 27 states were participating, and there were 2,874,055 subscribers. Financially, every nonprofit hospital service plan has been successful and has accumulated reserve funds. Cleveland, with 106,000 subscribers, has built up a reserve fund of \$360,000 in four years, and in New York City the reserve has mounted to over \$2,000,000."

* * *

Governor Dickinson of Michigan has appointed a new State Advisory Council of Health which includes the following names: Dr. Carleton Dean, of Charlevoix; Dr. A. D. Aldrich, Houghton; Dr. Roy C. Perkins, Bay City; Dr. Henry F. Vaughan, of the Detroit Public Health Department, and Dr. John Lavan, Grand Rapids.

The Governor also appointed six new members to the State Board of Registration in Medicine and reappointed four others. Those newly appointed were: Dr. Elmer W. Schnoor, Grand Rapids; Dr. Francis B. Jarzembowski, Detroit; Dr. W. C. Ellet, Benton Harbor; Dr. Luther Peck, Plymouth; Dr. Horace L. French, Lansing, and Dr. G. M. Byington, Detroit. Those reappointed were Dr. J. Earl McIntyre, Lansing; Dr. J. D. Brook, Grandville; Dr. William E. Tew, Bessemer, and Dr. Claude R. Keyport, Grayling.

* * *

The annual meeting of the Wayne County Medical Society was held on Monday, May 15. Dr. Ralph Pino, who succeeds Dr. Henry R. Carstens as president, was inducted into office. The program consisted of a memorial meeting to the late Dr. George E. McKean. The event was marked by the unveiling of a portrait of Dr. McKean painted by Roy Gamble. The dedication address was made by Dr. Alexander W. Blain, chairman of the Board of Trustees of the Wayne County Medical Society. Dr. McKean was president of the society in 1919-1920, following which term of office he served as a member of the Board of Trustees for thirteen years. Dr. Raymond B. Allen, dean of the Wayne University College of Medicine, delivered the principal address of the meeting on the opportunities for continuous medical education in Wayne County.

Henry R. Carstens, M.D., retiring President of WCMS, was elected to the Board of Trustees for a term of five years. R. L. Novy, M.D., and R. C. Connelly, M.D., were elected Chairman and Secretary respectively of the Medical Section; W. D. Barrett, M.D., and E. G. Krieg, M.D., were elected Chairman and Secretary respectively of the Surgical Section.

GENERAL NEWS AND ANNOUNCEMENTS

Physicians who have addressed county medical societies and lay groups during the past month include: C. E. Simpson, M.D., Detroit, who spoke to the Men's Club of the M. E. Church in Detroit on the subject of "Socialized Medicine" on April 10.

Parker Heath, M.D., Detroit, discussed "Common Fundoscopic Findings of Interest to the General Practitioner" at the meeting of the Ingham County Medical Society on April 18.

J. Warrick Thomas, M.D., Cleveland, discussed "Allergy in General Practice" before the meeting of the Jackson County Medical Society on April 19.

N. L. Parker, M.D., Chicago, addressed the Berrien County Medical Society on April 19, on the subject of "Surgery of the Gastro-intestinal Tract."

Carl V. Weller, M.D., Ann Arbor, addressed the Muskegon County Medical Society on April 21, on the subject of "New Concepts of Pathology."

John A. McGregor, M.D., of London, Ontario, discussed "Problems in Internal Medicine" at the meeting of the St. Clair County Medical Society on April 25.

C. E. Merritt, M.D., Bay City, presented "A Modern Philosophy of Public Health" before the Bay County Medical Society on April 26. Dr. Merritt gave a practical demonstration of modern technic for vaccination, immunizations, and tuberculin tests.

Floyd T. Romberger, M.D., of Lafayette, Indiana, presented the subject of "Anesthesia Up to Now" at a meeting of the Kent County Medical Society on April 26.

Robert S. Breakey, M.D., of Lansing, discussed "Syphilis Control" at the meeting of the Hillsdale County Medical Society on April 27.

Harry J. Isaacs, M.D., Chicago, addressed the Calhoun County Medical Society on May 2, on the subject "Diagnosis and Treatment of Right and Left Heart Failure."

Wm. D. Robinson, M.D., Ann Arbor, Department of Internal Medicine, presented the subject "Indications for Therapeutic Use of Vitamin B" at the meeting of the Washtenaw County Medical Society on May 9.

Pearl Kendrick, M.D., of Grand Rapids, addressed the Ionia-Montcalm Medical Society on May 9, on the subject of "Recent Work with Whooping Cough Vaccine."

R. J. Needles, M.D., of Detroit, discussed before the St. Clair County Medical Society on May 9, the subject "Sulfapyridine in the Treatment of Pneumonia."

Mr. Leo Ford, Attorney from Chicago, Ill., discussed "Malpractice and its Defense" at the joint meeting of the Bay County Dental Society-Bay County Medical Society on May 10.

Frank Belsley, M.D., of Ann Arbor, presented the subject "Toxemias of Pregnancy" at the meeting of the Berrien-Cass county medical societies on May 17.

The following physicians presented papers at the recent meeting of the American College of Physicians in New Orleans: H. A. Towsley, M.D., Ann Arbor, presented "Colored Motion Pictures on the Acute Exanthems"; Fred J. Hodges, M.D., of Ann Arbor, presented "Roentgen Procedures Useful in Cardiac Diagnosis"; Frank H. Bethell, M.D., of Ann Arbor, discussed "The Influence of Iron and Diet on the Blood in Pregnancy."

Alexander M. Campbell, M.D., Maternal Health Consultant, Bureau of Maternal Health and Child Health, addressed the Northern Michigan Medical Society in Petosky on May 10, on "The Conduct of Labor."

JUNE, 1939

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GENERAL NEWS AND ANNOUNCEMENTS

UPPER PENINSULA MEDICAL SOCIETY

Escanaba, Michigan, August 23-24, 1939

Tentative Program

Wednesday, August 23, 1939

12:00 Noon

Luncheon in honor of M.S.M.S. Officers and Councilors.

Afternoon Session—1:30 P. M.

Henry F. Helmholz, M.D., Rochester, Minn.—“Urinary Tract Infections in Children.”

L. G. Christian, M.D., Lansing, Mich.—“Serum Treatment of Pneumonia.”

Francis D. Murphy, M.D., Milwaukee, Wisc.—“Problems in Clinical Medicine.”

W. E. Blodgett, M.D., Detroit, Mich.—“First Aid Treatment of Fractures—Transportation.”

Evening—7:00 P. M.

W. W. Bauer, M.D., Chicago, Ill.—(Banquet Speaker).

Thursday, August 24, 1939

Morning Session—9:00 A. M.

Business Meeting. Election of Officers.

Henry R. Carstens, M.D., Detroit, Mich.—“Peripheral Vascular Disease.”

Horton Casparis, M.D., Nashville, Tenn.—“Tuberculosis.”

John T. Murphy M.D., Toledo, Ohio—(Subject to be sent in).

CREDIT IS DUE

Registration at M.S.M.S. Convention

Wednesday, September 21, 1938

Drs. Vernon C. Abbott, Pontiac; S. L. Adelson, Detroit; Leopold Adler, Detroit; E. G. Aldrich, Detroit; W. H. Alexander, Iron Mountain; A. D. Allen, Bay City; Russell W. Alles, Detroit; Herbert C. Allison, Grosse Pointe; Norman Amos, Battle Creek; T. G. Amos, Detroit; P. D. Anneberg, Detroit; George E. R. Anthony, Flint; Meyer S. Ascher, Detroit; Z. R. Aschenbrenner, Royal Oak; L. B. Ashley, Detroit.

Drs. Morris E. Bachman, Detroit; F. A. Baker, Pontiac; Geo. M. Baker, Parma; F. W. Bald, Flint; Charles S. Ballard, Detroit; Albert S. Barr, Ann Arbor; C. D. Barrett, Mason; C. M. Baskerville, Mt. Pleasant; Watson Beach, Detroit; Colin Beaton, Detroit; Eva F. Beck, Eloise; H. F. Becker, Battle Creek; M. B. Beckett, Allegan; Carl B. Beeman, Grand Rapids; Howell L. Begle, Detroit; G. W. Behan, Galesburg; Wm. C. Behen, Lansing; Zina B. Bennett, Detroit; Davis A. Benson, Detroit; John C. Benson, Flint; Bernard Bernbaum, Detroit; Martin Bernfield, Detroit; Samuel S. Bernstein, Detroit; Harry G. Bevington, Detroit; Frank B. Bicknell, Detroit; D. L. Bishop, Flint; James B. Blashill, Detroit; Abraham Bloch, Detroit; William E. Blodgett, Detroit; Leon M. Bogart, Flint; W. P. Boles, Flint; A. T. Bonathan, Flint; W. P. Bope, Decatur; David A. Boyd, Ann Arbor; Wm. Brace, Ann Arbor; C. W. Brainard, Battle Creek; B. Brand, Detroit; James R. Breakey, Ypsilanti; Robert S. Breakey, Lansing; O. A. Brines, Detroit; Harvey Broderick, River Rouge; William Bromme, Detroit; Eugene S. Browning, Grand Rapids; Jacob Bruggema, Ewart; Howard O. Brush, Port Huron; Charles M. Burgess, Detroit; L. V. Burkett, Flint; Max Burnell, Flint; Perry P. Burnstine, Detroit; H. S. Burstein, Detroit; I. M. Burstein, Detroit; M. M. Burstein, Detroit; Milton G. Butler, Saginaw.

Drs. Carl D. Camp, Ann Arbor; James E. Caraway, Detroit; L. H. Carleton, Detroit; E. H. Carroll, Detroit; A. L. Chapman, Detroit; N. J. Carney, Durand; C. H. Carpenter, Detroit; L. F. Carter, Detroit; Roscoe W. Cavell, Eloise; J. H. Chalal, Detroit; Henry G. Chall, Detroit; Arthur N. Chatel, Detroit; George E. Chittenden, Detroit; G. C. Chostner, Detroit; J. W. Christie, Pontiac; Laurence Chrouch, Detroit; A. S. Church, Eloise; Starr K. Church, Marshall; Emilie Arnold Clarke, Detroit; Glenn Clements, Ann Arbor; T. Percy Clifford, Detroit; John H. Cobane, Detroit; Leon F. Cobb, Pontiac; Don A. Cohoe, Detroit; Margarete W. Coleman, Detroit; Frederick A. Collier, Ann Arbor; Harrison S. Collisi, Grand Rapids; Raymond G. Colyer, De-

troit; Jerome W. Conn, Ann Arbor; John Joseph Connors, Detroit; J. E. Cooper, Battle Creek; H. E. Cope, Detroit; E. R. Conrad, Detroit; E. H. Corley, Jackson; Robert L. Cowen, Detroit; F. Cox, Jackson; A. W. Coxon, Detroit; B. A. Credille, Flint; R. H. Criswell, Bay City; James E. Croushore, Detroit; Guy D. L. Culver, Stockbridge; F. S. Curry, Detroit;

Drs. Harold J. Damstra, Allegan; J. C. Danforth, Detroit; Alfred Dean, Grand Rapids; C. R. Defever, Detroit; R. H. Denham, Grand Rapids; J. Lewis Dill, Detroit; Bruce H. Douglas, Detroit; Harvey E. Dowling, Detroit; Ira G. Downer, Detroit; Charles R. Doyle, Lansing; Harold Drinkaus, Detroit; Edmund J. Dudzinski, New Baltimore; Edward A. Duffy, Detroit; F. Mansel Dunn, Lansing; Paul J. Dwaihy, Detroit.

Drs. F. J. Eakins, Detroit; C. T. Ekelund, Pontiac; Cecil W. Ely, Saginaw; Nina M. Ely, Bay City; S. G. Epstein, Detroit; Milton Hyland Erickson, Eloise; Wm. A. Evans, Detroit; R. T. Ewing, Monroe; Esther Eymer, Saginaw.

Drs. S. E. Far, Quincy; S. S. Farbman, Detroit; L. A. Farnham, Pontiac; T. Finkelstein, Flint; Ralph L. Fitts, Grand Rapids; Norman Flaherty, River Rouge; S. T. Flynn, Flint; E. L. Foley, Alpena; Earl W. Foust, Hazel Park; William L. Foust, Grass Lake; B. L. Franklin, Remus; H. F. Fraser, Detroit; Robert C. Fraser, Port Huron; Thelma Freeman, Detroit; J. Courtney Fremont, Detroit; Hugo A. Freund, Detroit; George E. Frothingham, Detroit; A. C. Furstenberg, Ann Arbor.

Drs. D. B. Galerneau, Van Dyke; E. C. Galsterer, Saginaw; W. G. Gamble, Jr., Bay City; Cyrus B. Gardner, Lansing; Louis J. Gariepy, Detroit; C. R. Gatley, Pontiac; Harold H. Gay, Midland; S. M. Gelenger, Flint; William J. Gelhaus, Monroe; C. George, Ann Arbor; Frank B. Gerls, Pontiac; F. D. German, Pontiac; James L. Gillard, Muskegon; O. H. Gillett, Grand Rapids; Charles Gitlin, Detroit; Walter S. Glazer, Detroit; John E. Gleason, Detroit; J. L. Gles, Detroit; George R. Goering, Flint; Gerald Orton Grain, Detroit; Lee O. Grant, Grand Rapids; F. L. Graubner, Monroe; M. Z. Greenberg, Detroit; Chas. A. Groomes, Bay City; J. W. Gunn, Watervliet.

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GENERAL NEWS AND ANNOUNCEMENTS

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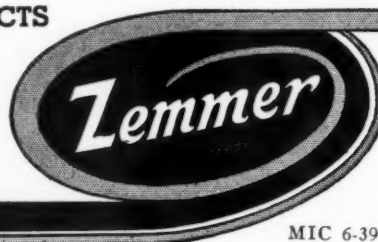
Acknowledgement of all books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review, as expedient.

PRINCIPLES OF HEMATOLOGY. With 100 Illustrative Cases, and 155 Illustrations Including 168 Original Photomicrographs and 95 Original Charts and Drawings. By Russell L. Haden, M.A., M.D., Chief of the Medical Division of the Cleveland Clinic, Cleveland, Ohio; Formerly Professor of Experimental Medicine in the University of Kansas School of Medicine, Kansas City, Kansas. Philadelphia: Lea & Febiger, 1939.

Probably no other medical subject has advanced more rapidly within such a short time as hematology. In fields of rapidly accumulating knowledge, new books or frequent revisions are a necessity. Dr. Haden's book presents up-to-date knowledge on the blood, together with clinical interpretations. The work is fully illustrated. It is of convenient size, 350 pages, and it contains no more and no less than should comprise a working knowledge for the medical practitioner.

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YOU CAN SLEEP WELL, The A B C's of Restful Sleep for the Average Person. By Edmund Jacobson, M.D. New York and London: Whittlesey House, McGraw-Hill Book Company, Inc., 1938. Price, \$2.00.

Dr. Jacobson is widely and favorably known for his writings on the subject of rest, relaxation and sleep. The present work is for the layman. It is written in part in a somewhat facetious vein; even when the writer is serious, he is always interesting. This book can be recommended to lay readers and the medical reader will also find it entertaining as well as instructive.

* * *

THE TREATMENT OF FRACTURES: By Charles Locke Scudder, A.B., Ph.B., M.D., F.A.C.S., Consulting Surgeon to the Massachusetts General Hospital; Formerly Assistant Professor of Surgery at the Harvard Medical School; Fellow American Surgical Association; Member of the American Society of Clinical Surgery. Eleventh Edition, Revised. 1,209 pages with 1,717 illustrations. Cloth \$12.00 net. Philadelphia and London: W. B. Saunders Company, 1938.

In contemplating this edition, the author has realized that many methods have become obsolete and that new methods of diagnosis and treatment have been proven of worth. He has, therefore, completely rewritten this edition, adding many new illustrations which add materially to the value of the book. Realizing, too, the existence of special problems in the treatment of fractures, he has availed himself of the services of men who are especially qualified to discuss the diagnosis and treatment of special fractures.

Attention is given to the subject of the initial care and transportation of fracture cases. The use of the fluoroscope in the reduction of fractures, the subject of extension and counterextension and skeletal traction, together with the employment of plaster-of-Paris as a method of fixation are fully discussed. The author wishes to impress the student and practitioner that fracture is not simply a bone injury, but that, in addition, the surrounding soft parts partake in the damage as well. He, therefore, gives a thorough discussion of peripheral nerve injury, Volkmann ischemic contracture, myositis ossificans, together with their prophylaxis and treatment.

In the discussion of specific fractures, each member is taken up in the usual manner. He has not attempted to describe every method in use, but those methods that have been employed by him and found useful and applicable are described in detail. As throughout the whole work, many excellent half-tones, drawings and reproductions of x-ray films illustrate the methods used.

In discussing the operative treatment of fractures, the author expresses the belief that to be qualified to employ the open method of treatment, the surgeon should possess special qualifications of skill in surgical technic. He describes the principles involved in the open operation versus the non-operative treatment and gives special details that should be given consideration in order to secure successful results. His discussion of the method of approach in the operative treatment in various localities, his description of methods of reduction and of instruments used in open reduction operations and his description of methods of fixation, by the

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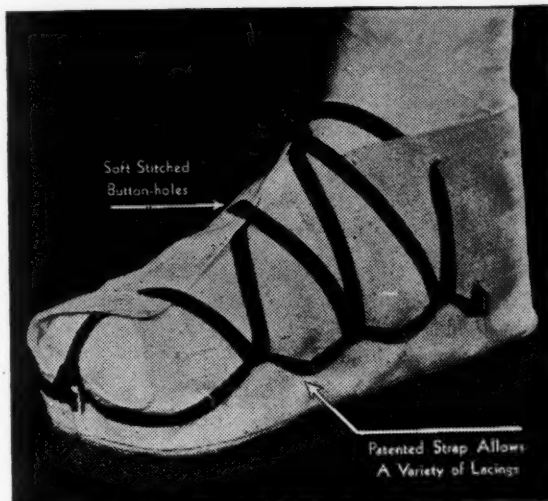
use of screws, bone splints and pins, et cetera, giving the advantages and disadvantages of each, is complete in its detail.

For one who wishes to know the latest methods of treating fractures and for one who wishes a thorough understanding of the principles involved in their treatment, this work will fulfill those desires.

UROLOGY. By Daniel N. Eisendrath, M.D., Consulting Urologist to the American Hospital, Paris, France; formerly attending urologist, Michael Reese and Cook County Hospitals; Assistant Professor of Surgery (Genito-Urinary) Rush Medical College of the University of Chicago and Harry C. Rolnick, M.D. Attending Urologist, Michael Reese, Mt. Sinai, and Cook County Hospitals, Chicago; formerly Clinical Professor of Urology, Loyola University Medical School. 750 black and white illustrations and 12 in color. Fourth edition, entirely revised and reset. Philadelphia—Montreal—London: J. B. Lippincott Company.

In an effort to simplify this work for teaching purposes and, because of improvements in diagnostic and therapeutic methods, the authors have made a complete revision of the previous edition. In the chapters on embryology, anatomy and physiology of the urogenital tract the treatment is complete and many illustrations are given to give the urologist an understanding of the facts that are fundamental to the practice of this specialty. Laboratory methods of examination and the use of the various functional tests are given, together with the technic of their performance and their interpretation. Urethroscopy, cystoscopy and urethral catheterization and the various types of instruments used in such examinations are described in detail. Many illustrations are given to show the procedures and colored plates illustrate the findings when these examinations are made. In the chapter on radiography of the genito-urinary system the authors discuss the value of the various methods of radiographic study, giving their interpretation of the advantages and disadvantages of each method. Radiographic findings are pictured and their interpretation is discussed. With these chapters at his disposal, the urologist will find assistance in the interpretation of his problems.

In the discussion of venereal diseases, particular attention is given to the discussion of gonorrhea and its complications. This disease, as it occurs in female, is amply covered. In the consideration of the affections of the urogenital tract, the authors have taken each organ separately and given a full and complete discussion of the pathological conditions found in that organ, including the anomalies, injuries, neoplasms and various types of infection. The treatment of the subject of kidney affections is particularly complete. Cryptorchidism, together with



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the hormones treatment is handled with conservation. Sterility in the male is given the consideration that it deserves and sex neuroses are discussed in a manner that is enlightening. Urology in the female and in children is given more consideration than is found in many texts. Several chapters are given to operative technic and many procedures are illustrated with drawings.

PATIENTS' ACCOUNTS

(Continued from page 518)

mentioned frequently in these columns before, we feel that to do justice to this subject we should emphasize the importance of proper collection procedures during the accumulation of the estate. A current account is worth much more than one long past due. Similarly money in the bank is worth considerably more than a patient's promise to pay (or failure to promise to pay). We have definitely proven not only to ourselves, but to a great many doctors now in practice that the best collection procedures not only bring in the maximum income, but also help to build the most goodwill. The minimum of doubtful accounts on the books, simultaneously with the maximum of cash in the bank greatly assists in the accumulation of the estate and at the same time minimizes the problems of an executor or administrator.

Your Chest Should Be Flat, says S. A. Weisman, in a little book written after examining many thousand school children and college students and determining the thoracic index—the ratio of the width to the depth of the chest. Contrary to the belief of the majority of physicians it was found that the round deep chest with a higher thoracic index is associated more frequently with tuberculosis than the wide flat chest. Correlating the thoracic index to age, sex, weight, height, vital capacity, racial stock and environment, he concludes that the round deep chest is associated with a retarded physical development, which occurs more frequently in an unsuitable environment than a more favorable one. Children with rounded shoulders and deeper chests should be watched carefully if tuberculosis is to be prevented. Weisman, S. A., Lippincott, 1938.

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Among Our Contributors

Dr. Hira E. Branch is a graduate of the University of Michigan Medical School, class of 1932. He received orthopedic training at Harper Hospital and Children's Hospital, Detroit, and also held a Fellowship in Orthopedics at the Ruptured and Crippled Hospital, New York City. Dr. Branch is an instructor in Orthopedic Surgery at the Wayne University Medical School, and is a Diplomate of the American Board of Orthopedic Surgery.

* * *

Dr. Milton G. Butler is a graduate of the Medical College of the University of Michigan, and pursued postgraduate work in dermatology at the University of Buffalo. He taught dermatology and served as a resident under Dr. Earle Osborne at the University of Buffalo College of Medicine. Dr. Butler has been in private practice at Saginaw, Michigan, since 1932, and his practice is limited to dermatology. Dr. Butler is a member of the American Academy of Dermatology and Syphilology.

* * *

Dr. Maurice Kadin is a graduate of the University of Chicago, and in 1937 he graduated from Rush Medical College. He was resident physician at the Cook County Hospital, and in 1938 entered general practice at Calumet, Michigan, where he is on the staff of the Calumet Memorial Hospital.

* * *

Dr. Samuel J. Levin graduated from the University of Toronto in 1923. He was Interne and Resident in the Department of Pediatrics and Allergy at the University Hospital, Ann Arbor, 1923-1925, and Resident Mount Sinai Hospital, New York 1925-1926. He was instructor in the Department of Pediatrics and Allergy, University of Michigan, 1926-1927, and Instructor in Pediatrics, Wayne University College of Medicine, since 1927. He is in charge of the Allergy Clinic, Children's Hospital of Michigan, Detroit. Dr. Levin limits his practice to Allergy.

* * *

Dr. Walter J. Maddock of Ann Arbor is a graduate of the University of Michigan Medical School, 1927. He is now Associate Professor of Surgery at the University of Michigan.

* * *

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* * *

Dr. C. L. R. Pearman was graduated from the University of Michigan Literary College in 1922, and Wayne University College of Medicine in 1927. He was Resident Psychiatrist at the Eloise Hospital from 1928 to 1937, also Lecturer in Psychiatry and Clinical Demonstrator. At the present time, Dr. Pearman is psychiatrist at the Wayne County Clinic for Child Study.

* * *

Dr. John George Slevin was graduated from the University of Detroit in 1925, and received his M.D. degree from St. Louis University in 1929. At present, he is assistant attending surgeon at Grace Hospital and attending surgeon at Mt. Carmel Mercy Hospital, Detroit.